KENWOOD

AUDIO/VIDEO STEREO RECEIVER

KR-V9030

INSTRUCTION MANUAL

KENWOOD CORPORATION

Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features and system-connection considerations so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability we have sought to anticipate your needs and desires.

Keep this manual handy for future reference.

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model _____ Serial Number _____

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.
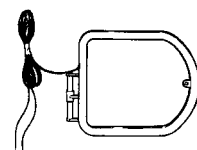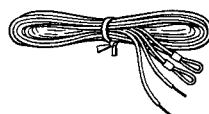
For the U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.
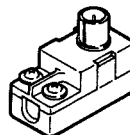
Accessories

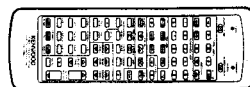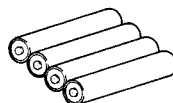FM indoor antenna 1   AM loop antenna 1

75 Ω/300 Ω   Loop antenna holder.......... 1
antenna adaptor 1

Batteries   Remote control unit........... 1
("R03" or "AAA") 4

Overlay sheet 1   AC plug adaptor 1
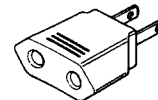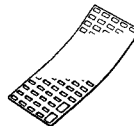
(Except for some areas)

Contents

Caution: Read the pages marked ⚠ carefully to ensure safe operation.

Before applying power

For the U.S.A. and Canada

Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THE AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

For the United Kingdom

Important!

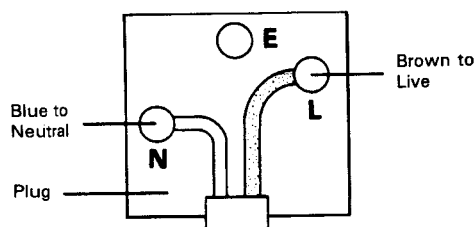Units shipped to the U.K. are designed for operation on 240 volts AC only.

The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue	Neutral
Brown	Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

Wire colour   **Plug terminal marking**

Blue	N or Black
Brown	L or Red

E

Brown to Live

Blue to Neutral

L

N

Plug

Notes:
1. If a 13-amp plug is used, this must be fitted with a 5-amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

For Australia and Europe

Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 230 V AC only.

For other countries

Important!

Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

AC voltage selection

This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch Type A or Type B on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.
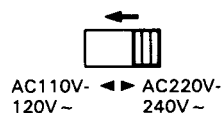
Note:
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

AC voltage selector switch

Type A

AC110-120V~   AC220V~   AC240V~

Type B

AC110V-120V~ ◀▶ AC220V-240V~
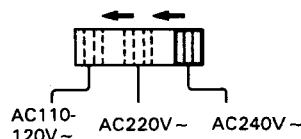
Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

Safety precautions

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

⚡ **CAUTION** RISK OF ELECTRIC SHOCK DO NOT OPEN ⚠	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
⚡	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
⚠	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

IMPORTANT SAFEGUARDS

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

1. **Power sources** — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

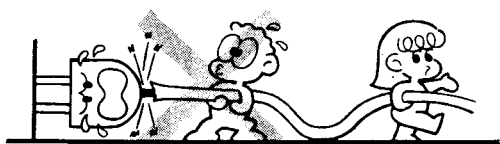2. **Power-cord protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Never pull or stretch the cord.

3. **Grounding or polarization** — The precautions should be taken so that the grounding or polarization means of this unit is not defeated.

4. **Ventilation** — The unit should be situated so that its location or position does not interfere with its proper ventilation.
To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.
Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.
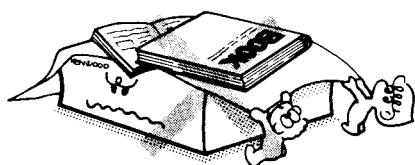
5. **Water and moisture** — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
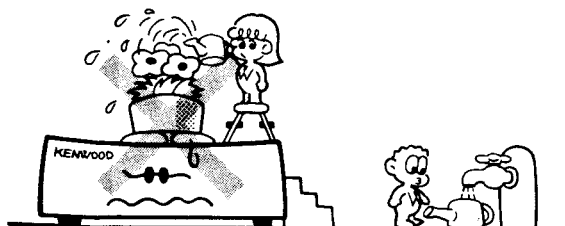
6. **Temperature** — The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

7. **Heat** — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.
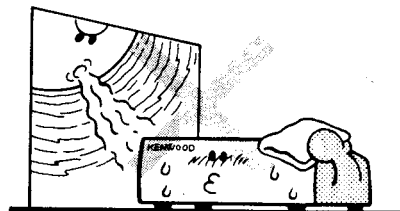
8. **Electric shock** — Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.
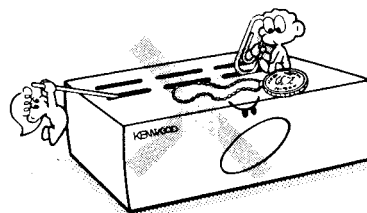
9. **Enclosure removal** — Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.
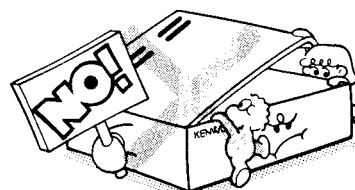
10. **Magnetic fields** — Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.
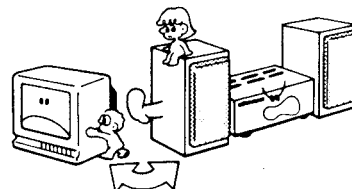
11. **Cleaning** — Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.
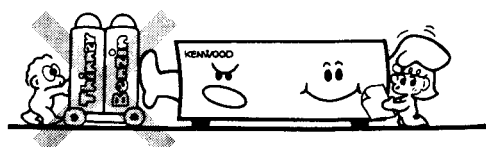
12. Carts and stands — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

13. Nonuse periods — The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

14. Abnormal smell — If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

POWER OFF!
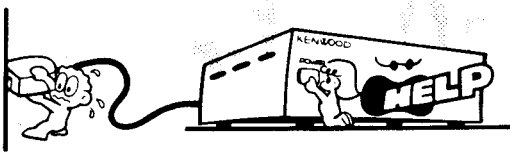
15. Damage requiring service — The unit should be serviced by qualified service personnel when:

A. The power-supply cord or the plug has been damaged; or
B. Objects have fallen, or liquid has been spilled into the unit; or
C. The unit has been exposed to rain; or
D. The unit does not appear to operate normally or exhibits a marked change in performance; or
E. The unit has been dropped, or the enclosure damaged.

16. Servicing — The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
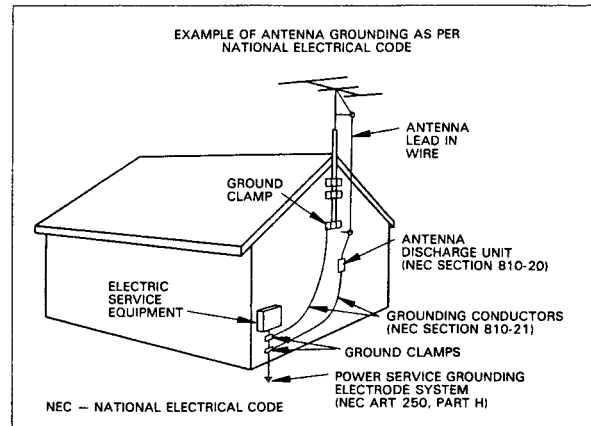
17. Outdoor antenna grounding — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/ NFPA No. 70—1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding con-

ductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

EXAMPLE OF ANTENNA GROUNDING AS PER
NATIONAL ELECTRICAL CODE

ANTENNA LEAD IN WIRE

GROUND CLAMP

ANTENNA DISCHARGE UNIT
(NEC SECTION 810-20)

ELECTRIC SERVICE EQUIPMENT

GROUNDING CONDUCTORS
(NEC SECTION 810-21)

GROUND CLAMPS

POWER SERVICE GROUNDING ELECTRODE SYSTEM
(NEC ART 250, PART H)

NEC — NATIONAL ELECTRICAL CODE

18. Power lines — An outdoor antenna should be located away from power lines.

19. AC outlets — Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.
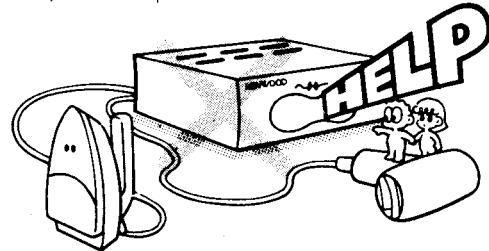
Notes:
1. **Item 3 is not required except for grounded or polarized equipment.**
2. **Item 17 and 18 are not required except for units provided with antenna terminals.**
3. **Item 17 complies with UL in the U.S.A.**

System connections

Make connections as shown in the diagram below. When connecting the related system components, refer also to the instruction manuals of the related components.
Do not plug in the power lead until all connections are completed.

■ Connection of audio components
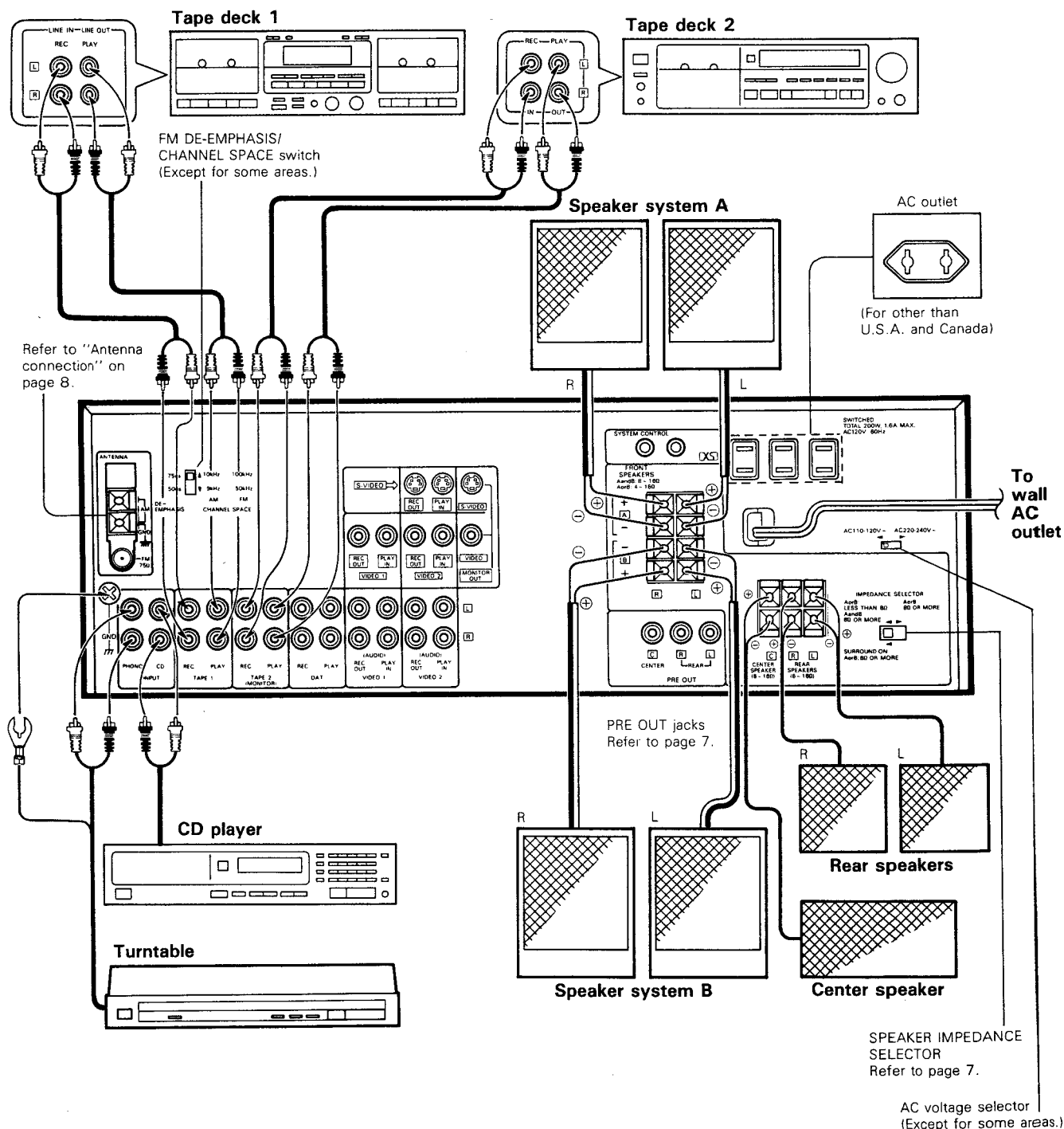
Notes:
1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.
3. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
4. Never short-circuit the + and − speaker cords.
5. If the left and right speakers are connected inversely or if the speaker cords are connected with reversed polarity, the sound becomes unnatural with ambiguous acoustic image positioning. Be sure to connect the speakers and speaker cords correctly.

Connection of speaker terminals

① Push lever.
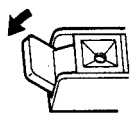
② Insert cord.

③ Lock lever.

■ Connection of PRE OUT jacks

Sound will not be output from the speakers if they are connected directly to the PRE OUT jacks. The output from these jacks should be connected to speakers with built-in amplifier, or to exclusive amplifiers to which the speakers are connected.

```
Center speaker
    |
  Amplifier

         [C]      [R]      [L]
       CENTER    L—REAR—J
              PRE OUT

   Amplifier ── Speaker
            └─ Speaker
```
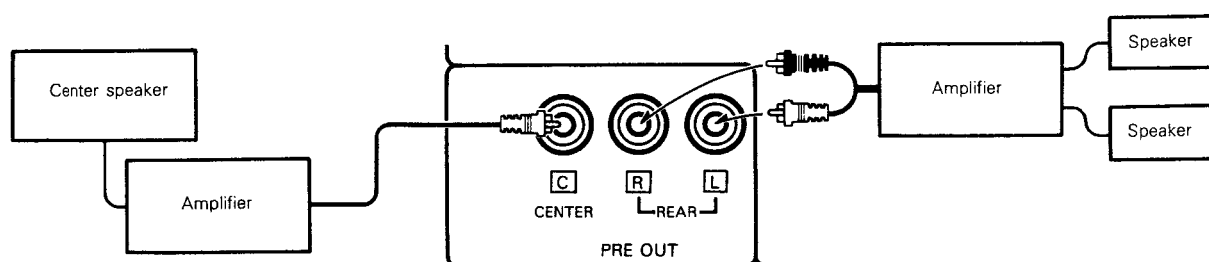
• Use these jacks if you want to listen to the speakers with larger volumes or with different tones.

■ Setting the SPEAKER IMPEDANCE SELECTOR

IMPEDANCE SELECTOR

AorB:
LESS THAN 8Ω

AorB:
8Ω OR MORE

AandB:
8Ω OR MORE

SURROUND ON
AorB: 8Ω OR MORE
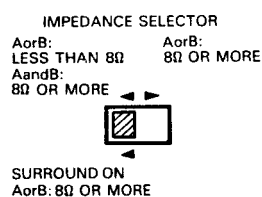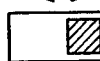
According to the impedance of the speakers used, set the SPEAKER IMPEDANCE SELECTOR on the rear panel as shown in the table.
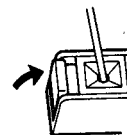
• During speaker system connection and operation of the SPEAKER IMPEDANCE SELECTOR, set the POWER switch to OFF.
• When the selector is at the [🔲] position, sound will not be heard from the center or rear speakers. If speakers (with amplifiers) are connected to the PRE OUT jacks, sound will be heard from those speakers.

① When Surround speakers are connected

Usable speaker impedance	Selector position
A or B speakers 8 Ω ~ 16 Ω	◄ ► 🔲
Center speaker 8 Ω ~ 16 Ω	◄ ←
Rear speakers 8 Ω ~ 16 Ω	

② When Surround speakers are not connected

Usable speaker impedance	Selector position
A or B speakers 4 Ω ~ 6 Ω	◄ ► 🔲
A and B speakers 8 Ω ~ 16 Ω	◄ ←
A or B speakers 8 Ω ~ 16 Ω	◄ ► 🔲 ◄ →

① Push lever.   ② Insert cord.   ③ Lock lever.

75us 50us DE-EMPHASIS   ▲ 10kHz ▼ 9kHz AM CHANNEL SPACE   100kHz 50kHz FM
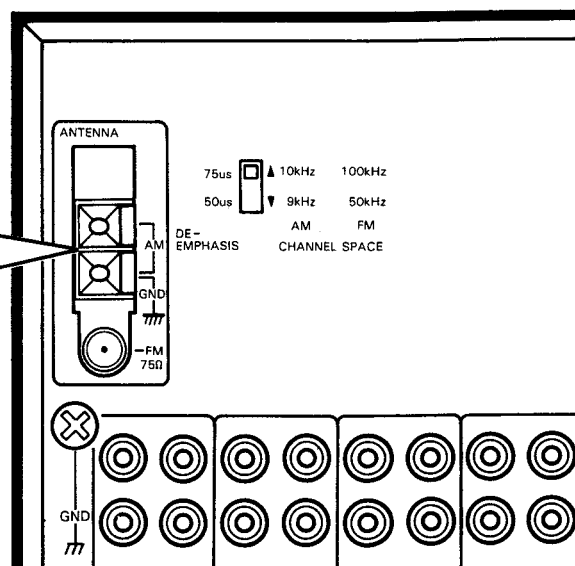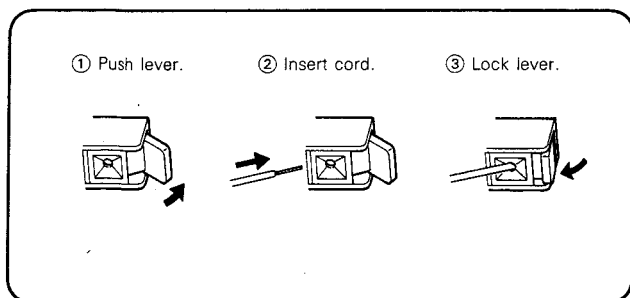
■ AM loop antenna connection

The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord, and set it to a direction which provides the best reception.

① Push lever.

② Insert conductor.

③ Return lever.
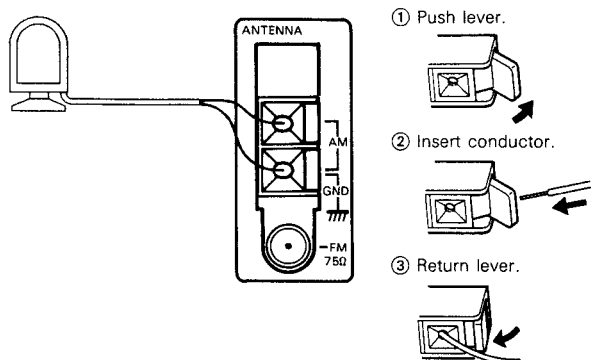
■ AM outdoor antenna connection

If the reception is poor when the AM loop antenna is used, distribute a vinyl-coated wire of more than 6 meters outdoors, without disconnecting the loop antenna.
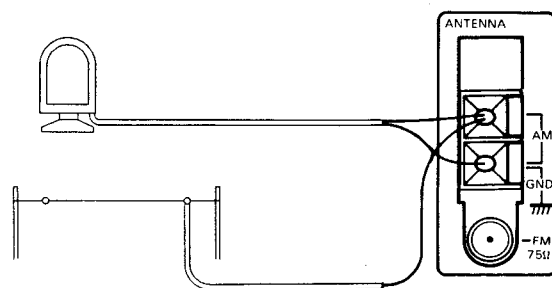
■ FM indoor antenna connection

① Connect to the screw terminals.
② Find the position that provides best reception.
③ Fix two ends.
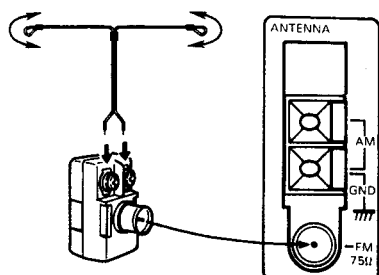
■ FM outdoor antenna connection
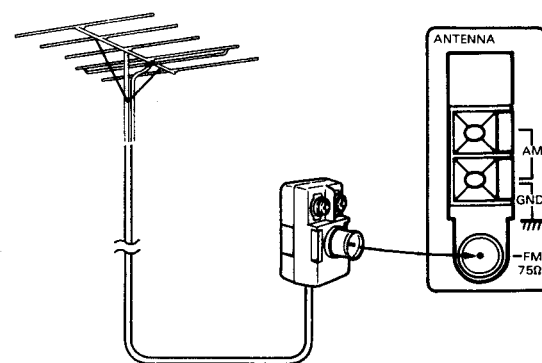
■ 75 Ω coaxial cable connection

① Arrange the coaxial cable as illustrated.

Outer shield
(Braid)

Inner
conductor

5 4 3 (mm)

RG-6 (5C-2V) or RG-59 (3C-2V)
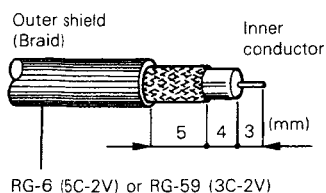
② Open the antenna adaptor.
Press the claws in the direction of the arrows with the fingers to release the lock and pull out the cover.

Claw
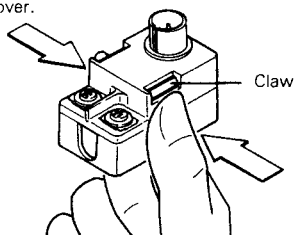
③ Cut off the red wire and remove it from the clip.

Remove the
red wire

Clip

Cut
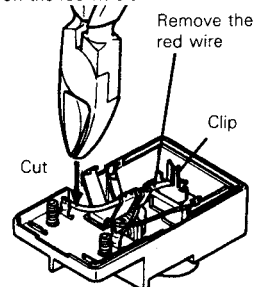
④ Insert into the slit on the clip. Fasten the bands A and B, using a pair of pliers.

Band A

Band B
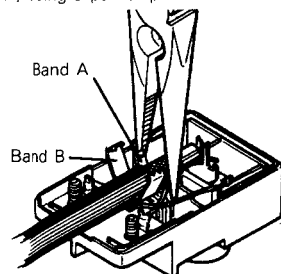
⑤ Close the cover.
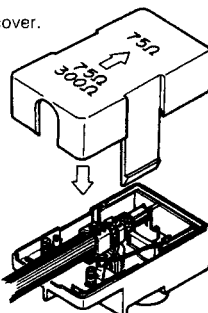
⑥ Connect the adaptor to the antenna terminal.

ANTENNA

AM
GND
FM
75Ω
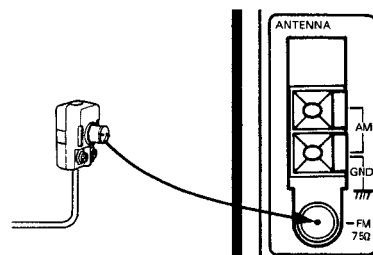
FM DE-EMPHASIS/CHANNEL SPACE switch (Except for some areas)

The FM DE-EMPHASIS/CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS/CHANNEL SPACE setting is not matched to the area where the unit is to be used; for instance, when you move from area 1 to area 2 or vice versa, desired reception of AM/FM broadcasts is not expected. In this case, change the FM DE-EMPHASIS/CHANNEL SPACE setting in accordance with the area corresponding to the table. The FM DE-EMPHASIS is switched over at the same time.

	Area	CHANNEL SPACE freq.	FM DE-EMPHASIS
1.	U.S.A., Canada and South American countries	FM: 100kHz AM: 10kHz	75 µs
2.	Other countries	FM: 50kHz AM: 9kHz	50 µs

75µs   ▲ 10kHz   100kHz

50µs   ▼ 9kHz   50kHz

             AM   FM

DE-
EMPHASIS   CHANNEL SPACE

● When changing the setting of the FM DE-EMPHASIS/CHANNEL SPACE switch, first disconnect the power cord, then reset the channel space switch, connect the power cord again, and turn the power on.
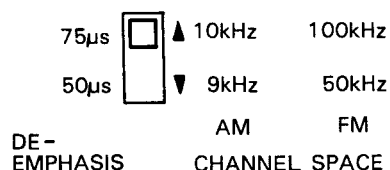
Connection for system control operation

Using the system control cords provided with KENWOOD system component models, make connections as shown below.

Turntable

* For a cassette deck to be subject to system control operation, it must be connected to the TAPE 1 jacks.

System control cord

Cassette deck

System control cord

CD player
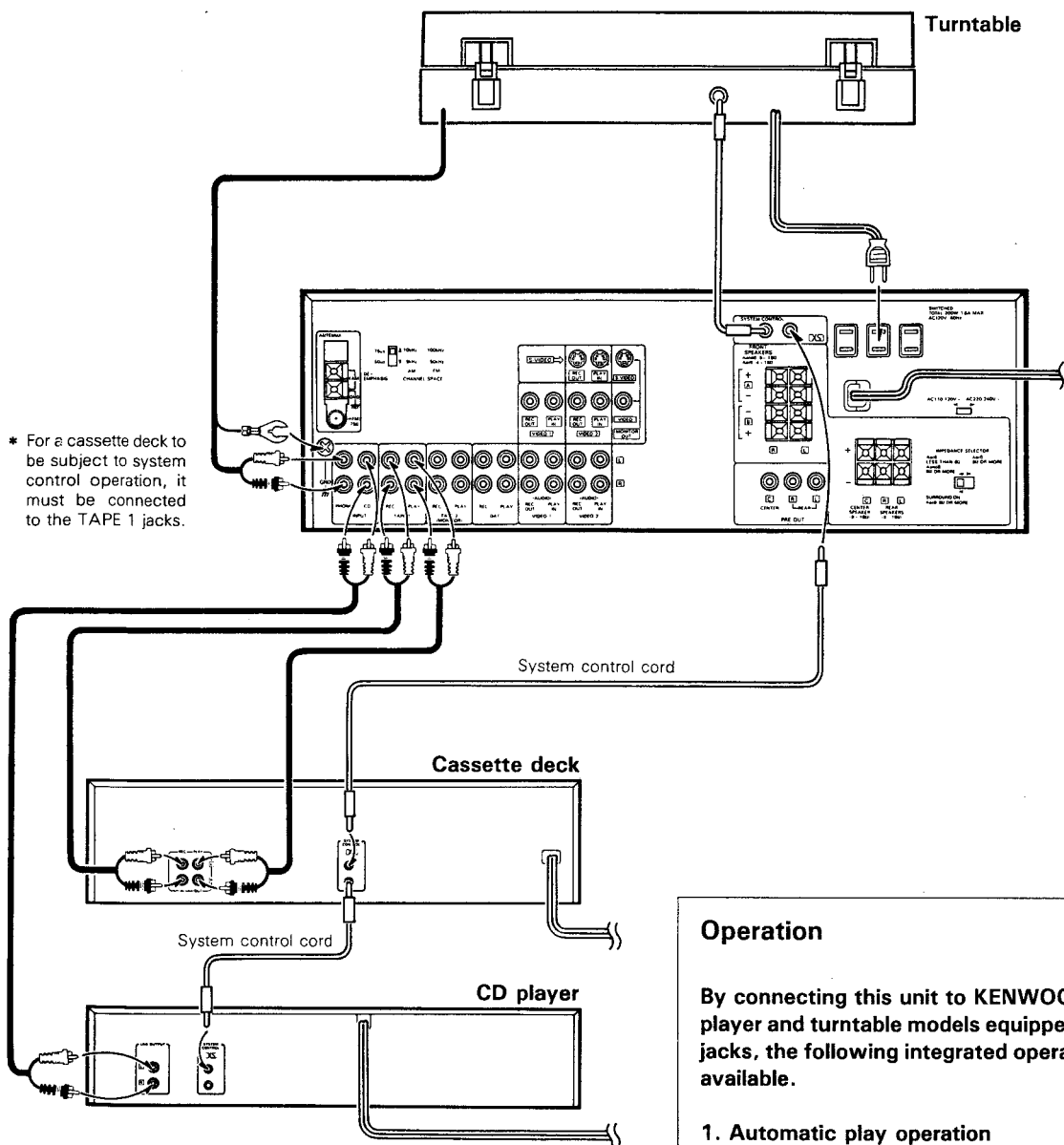
System control connection

X **O**
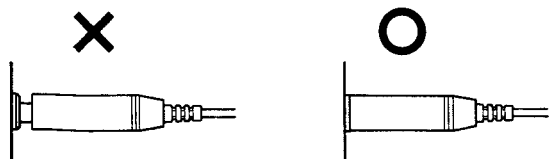
- Be sure to insert the system control cord plugs fully into the SYSTEM CONTROL terminals.
- If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.

Operation

By connecting this unit to KENWOOD cassette deck, CD player and turntable models equipped with system control jacks, the following integrated operation features become available.

1. Automatic play operation

When starting play with the turntable, cassette deck, or CD player connected to the receiver, press the desired input selector keys on the receiver. The turntable, cassette deck, or CD player will automatically enter play mode.

In the same way, pressing the Play key of the turntable, cassette deck, or CD player will automatically switch the input selector on the receiver to the component on which the Play key is pressed.

2. Synchro recording

To record the sound from the CD player or turntable onto a tape with the cassette deck, press the CD or PHONO of the input selector keys and load a CD or record. Set the cassette deck to rec pause mode, then press the Play (start) key of the CD player or turntable. The cassette deck will start recording automatially, synchronized with the CD player or turntable starting play.

3. Remote control

The remote control unit provided with this unit, to which a KENWOOD system turntable, cassette deck, or CD player is connected, is equipped with related control keys. The related components can be controlled using these keys.

Connection of video components

For the connections and operations, also read carefully the instruction manuals supplied with the video components to be connected.

VIDEO DECK 2
AUDIO IN
AUDIO OUT
VIDEO OUT
VIDEO IN

VIDEO DECK 1
VIDEO IN
VIDEO OUT
AUDIO IN

AUDIO OUT
VIDEO IN
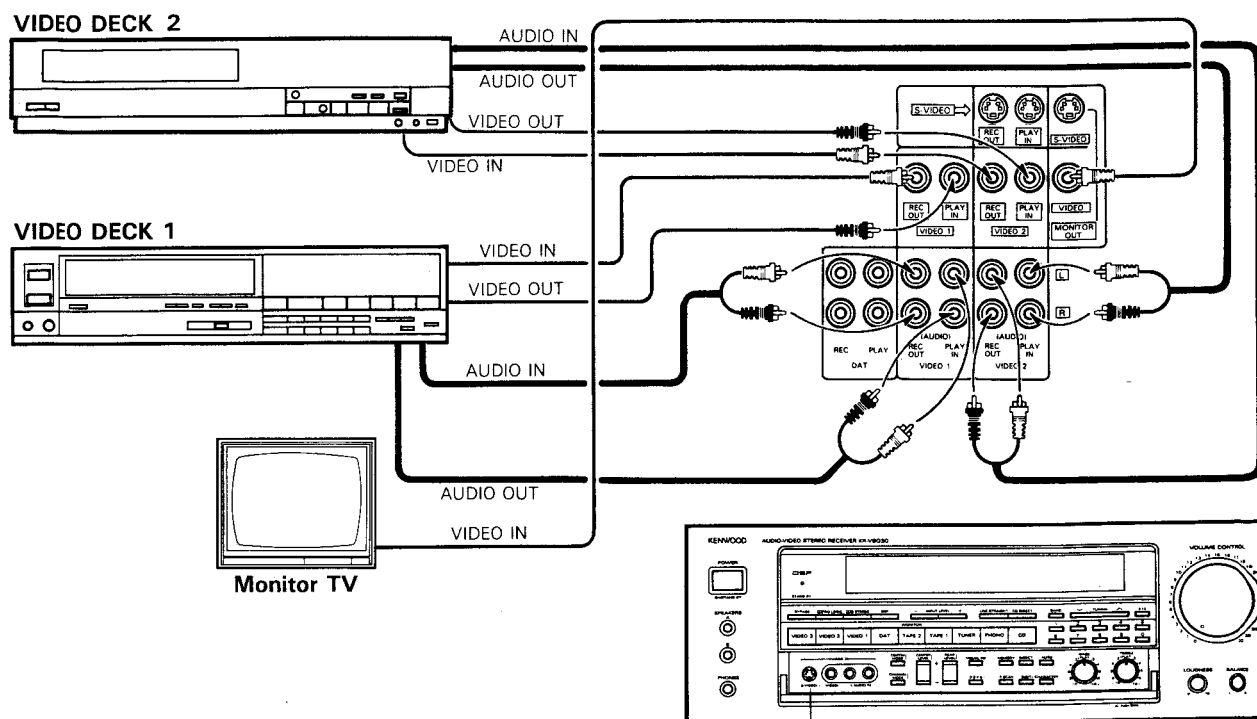
Monitor TV

① **Connection of monitor TV**
Connect the video input jack of the monitor TV to the MONITOR OUT jack on the rear panel using a video connection cord.
If the monitor TV is equipped with an S-VIDEO input jack, connect it to the S-VIDEO jack of this unit.

Notes:
1. When a video signal is input to this unit through the composite VIDEO jack, the same signal is not output from the S-VIDEO jack of the MONITOR OUT jacks.
2. When a video signal is input to this unit through the S-VIDEO jack, the same signal is not output from the MONITOR OUT video jack.

② **Connection of VCRs**
The VIDEO 2 inputs/outputs can be connected through the S-VIDEO jacks. Therefore, recording a video source of the component connected to S-VIDEO jacks is possible.

Note:
Dubbing between a VCR connected to a composite input/output and a VCR connected to an S-VIDEO input/output is not possible.

③ **Connection of other video components**
The S-VIDEO input jacks are also provided for the VIDEO 3 inputs. Therefore, recording a video source of the component connected to VIDEO 2 S-VIDEO jacks is possible.

Note:
Dubbing between a video component connected to a composite input/output and a video component connected to an S-VIDEO input/output is not possible.

S-VIDEO jacks

In the S-Video (Y/C separated) signal transmission system, the regular video signal (composite signal) is separated into a signal identifying the brightness (Y: luminance) and a signal identifying the color (C: chroma) to be transmitted.
Use of these jacks provides improved picture quality. When the S-VIDEO jacks are to be used, please read carefully the instruction manuals of the video components.

Connection of VIDEO 3 (AUDIO IN, VIDEO IN)
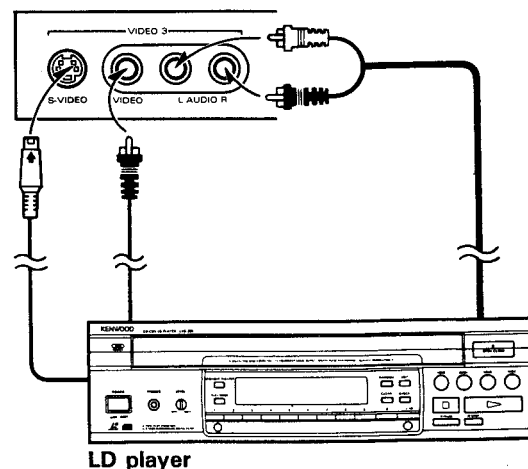
LD player

When connect to the KENWOOD LD player having system control terminal, do not connect anything to the system control terminal of the LD player.

Controls and indicators

POWER key

STAND BY indicator

Remote control light receptor

BYPASS key

□□ PRO·LOGIC key

□□ 3 STEREO key

DSP key

INPUT LEVEL keys

LINE STRAIGHT key

CD DIRECT key

BAND key

TUNING keys

+10 key

VOLUME CONTROL with point indicator

KENWOOD   AUDIO-VIDEO STEREO RECEIVER KR-V9030

POWER
ON/STAND BY

DSP

STAND BY

SPEAKERS
A
B

PHONES

VOLUME CONTROL
11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

BYPASS □□PRO·LOGIC □□3 STEREO DSP – INPUT LEVEL + LINE STRAIGHT CD DIRECT BAND ∨ TUNING ∧ +10

(MONITOR)
VIDEO 3 VIDEO 2 VIDEO 1 DAT TAPE 2 TAPE 1 TUNER PHONO CD

■ DIGITAL SIGNAL PROCESSING SURROUND SOUND · DIGITALLY ADJUSTED DELAY TIME

DOLBY SURROUND
PRO·LOGIC

LOUDNESS BALANCE

▲ PUSH OPEN

PHONES jack

Input select keys

Numeric keys

BALANCE control knob

LOUDNESS control knob

SPEAKERS A and B switches

A, B OFF — This position silences all speakers to permit private use of headphones.

A ON — Activates speakers connected to the SPEAKERS A terminals on the rear panel.

B ON — Activates the speakers connected to the SPEAKERS B terminals on the rear panel.

A, B ON — Activates the speakers connected to the SPEAKERS A and B terminals simultaneously.
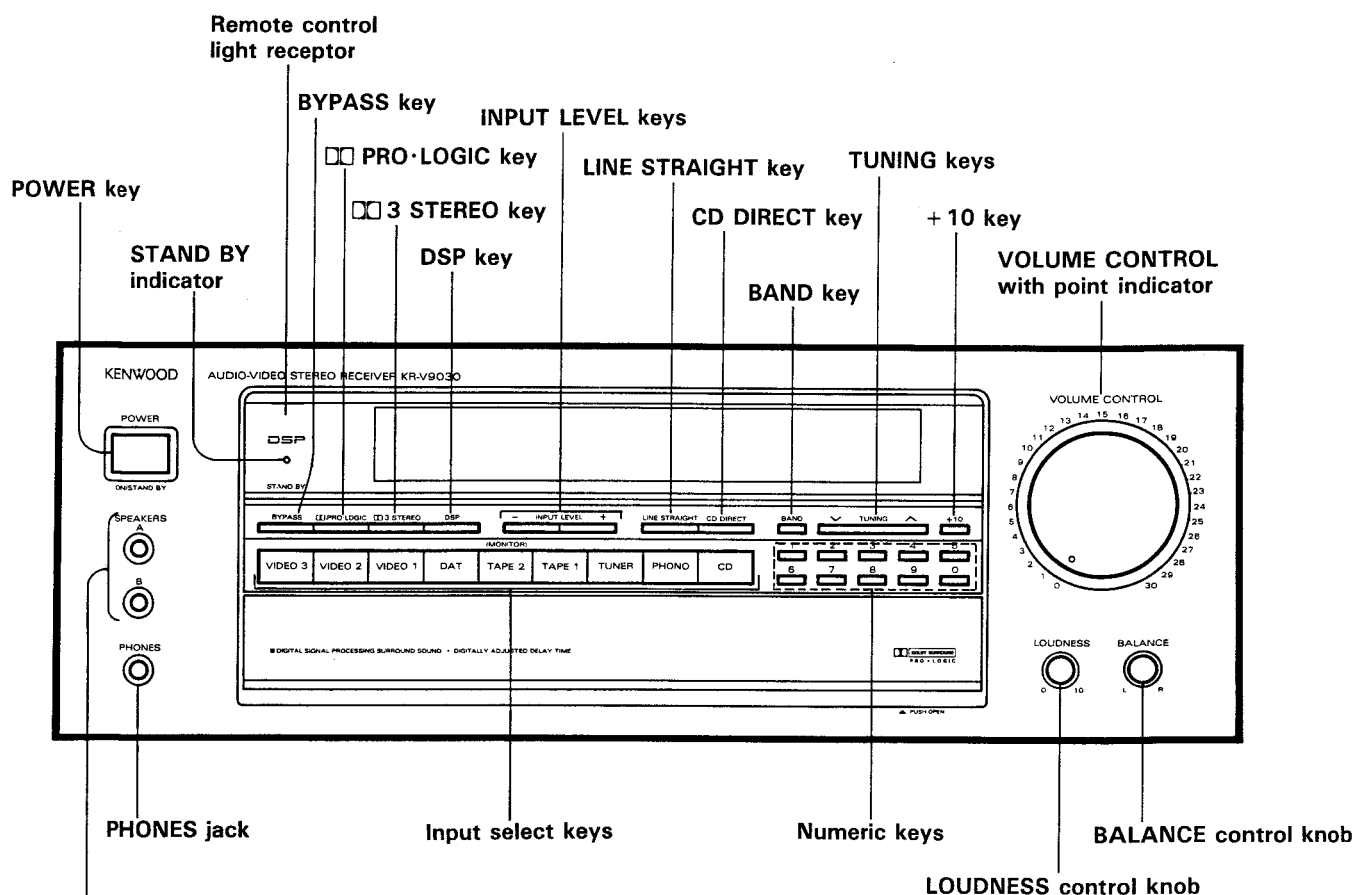
SPEAKERS
A
B
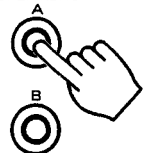
SPEAKERS
A

● If you press the □□ PRO·LOGIC key, □□ 3 STEREO key or DSP key when both the A and B SPEAKERS switches are ON, the unit will automatically switch to A so that sound is heard only from the A speakers. Pressing the B key at this time will switch the sound so that it is heard from the B speakers only.

Before operating the unit, remove packing material as shown below.
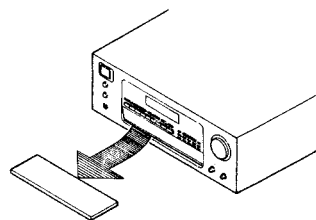
STAND BY mode of POWER switch

When the power cord of this system is plugged into an AC outlet, the STAND BY indicator lights up regardless of the ON/OFF setting of the POWER switch. This indicates that a small amount of current is being supplied to the unit to back up the memory contents. This mode is referred to as the Stand By mode. While the STAND BY indicator is lit, the power of the system can be switched ON/OFF from the remote control unit.

SPEAKERS A and B indicators

DSP indicators
(ARENA   JAZZ CLUB   STADIUM   DISCOTHEQUE)
(CATHEDRAL   MOVIE)

CD DIRECT indicator

OVER LEVEL indicator

CHANNEL MODE
indicators
(3 CHANNEL
(4 CHANNEL

MEMORY
indicator

VISUAL FIX
indicator

PRESENCE MODE indicators
(BYPASS
  ☐☐ PRO·LOGIC
  ☐☐ 3 STEREO
(DSP

D.S.P.S.
indicator

SPEAKERS	OVER LEVEL		ARENA	JAZZ CLUB	STADIUM	DISCOTHEQUE	CATHEDRAL	MOVIE		D.S.P.S.
A	B		BYPASS	☐☐ PRO.LOGIC	☐☐ 3 STEREO	DSP	3 CHANNEL	4 CHANNEL		MEMORY
VISUAL FIX	CD DIRECT									TUNED
VIDEO MONITOR	LINE STRAIGHT							ms kHz MHz/		STEREO
3 2 1	TAPE 2									AUTO

VIDEO MONITOR
1 2 3 indicators

LINE STRAIGHT indicator

AUTO indicator

STEREO indicator

TAPE 2 indicator

Information display
(● Tuning frequency and preset number
  ● Broadcasting name
  ● Input source
  ● Center and rear speaker's level
  ● Delay time
  ● Input level
(● Presence level

TUNED indicator

Push the bottom side of the
door to open.

Push up the top side of the door
to close.

CENTER LEVEL
control keys

VISUAL FIX key

MEMORY key

CENTER MODE key

DIRECT key

AUTO key

For VIDEO 3
S-VIDEO jack

REAR LEVEL
control keys

Tone control knobs
BASS
TREBLE

VIDEO jack   CHANNEL MODE key

AUDIO L and R jacks   D.S.P.S. key   CHARACTER key

DIGIT key

P.SCAN key

Basic operation

POWER key — Display — VOLUME CONTROL

PHONES jack — Input select keys — Tone controls BASS, TREBLE — LOUDNESS control — BALANCE control

■ Basic operation

1 Press the POWER key to ON.

POWER

ON/STAND BY
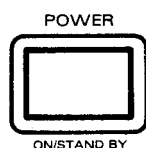
2 Select an input source.

INPUT TAPE 1
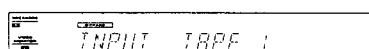
The source name characters appear on the display.

| VIDEO 3 | VIDEO 2 | VIDEO 1 | DAT | TAPE 2 | TAPE 1 | TUNER | PHONO | CD |
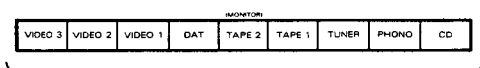
- When the cassette deck, CD player and turntable are connected via the system control cord, any of these source components starts to be played automatically when the corresponding input select key is pressed.

3 Play the source component.

4 Adjust the volume

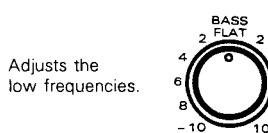VOLUME CONTROL
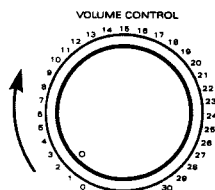
VOLUME CONTROL

Main unit — Remote control unit

- When the volume is adjusted from the remote control unit, the VOLUME CONTROL knob on the main unit rotates while the point indicator is blinking.
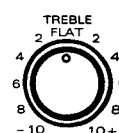
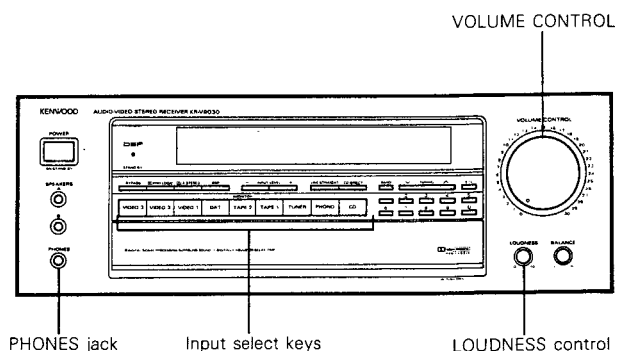### 5 Adjust the left and right volume balance.

BALANCE
L   R

6 Adjust the tone.

Adjusts the low frequencies.

BASS FLAT

TREBLE FLAT

Adjusts the high frequencies.

VOLUME CONTROL

PHONES jack   Input select keys   LOUDNESS control

■ To mute the sound temporarily

Press the MUTE key on the remote control unit.

MUTE
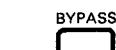
- The indicator on the VOLUME CONTROL knob on the front panel blinks
- Pressing the key again resumes the previous volume.

LOUDNESS control

Listening at high volume allows to enjoy dynamic sound, but human ears tend to feel low frequencies insufficient when listening at low volume. When the VOLUME CONTROL is set to a low position, the insufficiency of low frequencies felt by human ears can be compensated by turning the LOUDNESS control clockwise.

LOUDNESS

Enhances low frequencies.

0   10

- The effect of LOUDNESS control is less sensible if the VOLUME CONTROL is set to the center position or above.

■ Listening with headphones

1 Set the unit to BYPASS.

BYPASS   BYPASS

Main unit   Remote control unit

- When playing in any of presence modes, sound from the center and rear speakers will not be cut off unless the presence mode is canceled by pressing the BYPASS key. If you want to listen to sound played back in presence mode using headphones, set the volume to minimum.

2 Plug the headphones into the PHONES jack.

PHONES

- Set the A and B SPEAKERS switches to OFF.

3 Adjust the volume.
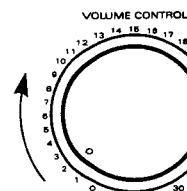
VOLUME CONTROL

- Turn the volume all the way down before unplugging the headphones.

Notes:
1. When TAPE 2 is ON, you cannot listen to the source selected by the input select keys. To listen to the selected source, set TAPE 2 to OFF.
2. Even if the power cord is unplugged, the currently selected source is stored in memory for several days. After this period elapses, however, the source is automatically switched to TUNER.
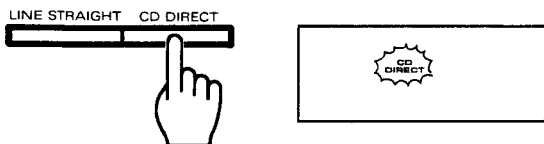
LINE STRAIGHT key

CD DIRECT key

Input slect key
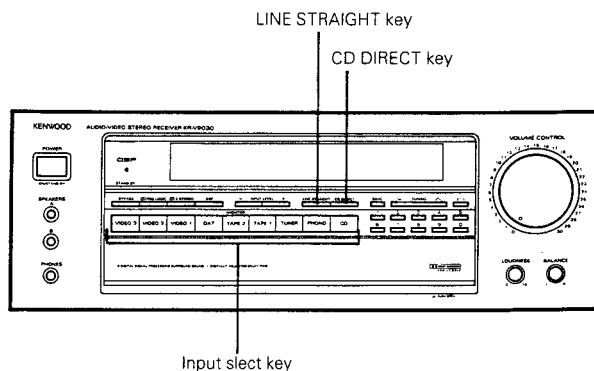
■ Operation of CD DIRECT playback

The digital sound of Compact Disc features an ideal reproduction characteristics, and the sound quality provided by CD can be reproduced with least degradation by means of the CD direct playback function.

1 Press the CD DIRECT key.
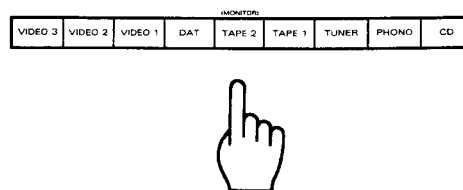
LINE STRAIGHT   CD DIRECT

● CD DIRECT indicator lights up.

2 Play the CD player.

PLAY/PAUSE

►/II
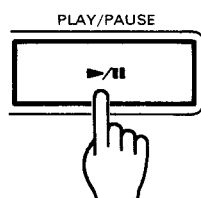
● The CD DIRECT selection is given priority to any other source being selected by the input select key.

■ Operation of LINE STRAIGHT playback

This CD, with least degradation of sound quality.

1 Select an input source.

(MONITOR)

| VIDEO 3 | VIDEO 2 | VIDEO 1 | DAT | TAPE 2 | TAPE 1 | TUNER | PHONO | CD |

2 Press the LINE STRAIGHT key.

LINE STRAIGHT   CD DIRECT
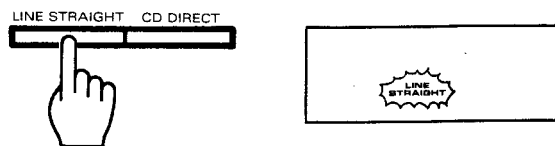
● LINE STRAIGHT indicator lights up.

3 Play the input source.

To cancel the CD DIRECT playback function

Press the CD DIRECT key again, or select the input select key.

LINE STRAIGHT   CD DIRECT
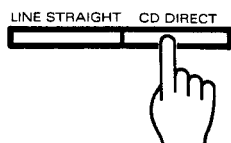
● CD DIRECT indicator goes off.

To cancel the LINE STRAIGHT playback

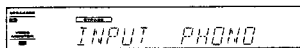Press the LINE STRAIGHT key again.

LINE STRAIGHT   CD DIRECT
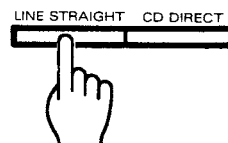
● LINE STRAIGHT indicator goes off.

Note:
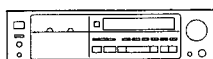During CD DIRECT or LINE STRAIGHT playback, the tone controls do not function.

■ Ordinary tape recording

1 Select the source to be recorded.

$INPUT\ PHONO$

VIDEO 3	VIDEO 2	VIDEO 1	DAT	TAPE 2	TAPE 1	TUNER	PHONO	CD

2 Set cassette deck 1 or 2 in the record-pause.

Record-pause mode

3 Play the source component to be recorded, and start recording it on the cassette deck.
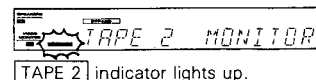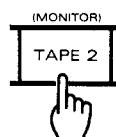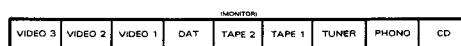
Recording starts.

■ Tape dubbing

TAPE 1 → TAPE 2

Play the cassette deck connected to TAPE 1 and record on the cassette deck connected to TAPE 2.

TAPE 2 → TAPE 1

1 Press the TAPE 2 key.

(MONITOR)

TAPE 2

$TAPE\ 2\ MONITOR$

TAPE 2 indicator lights up.

2 Select a source other than TAPE.

VIDEO 3	VIDEO 2	VIDEO 1	DAT	TAPE 2	TAPE 1	TUNER	PHONO	CD

3 Play cassette deck 2 and start recording on cassette deck 1.

● Do not select TAPE 1 while dubbing.

Note:
For the tape-to-tape dubbing procedure using a double-deck type cassette deck, please read the instruction manual provided with the double-deck type cassette deck.

■ Listening to CD while recording another source

1 Select the source to be recorded.

VIDEO 3	VIDEO 2	VIDEO 1	DAT	TAPE 2	TAPE 1	TUNER	PHONO	CD

2 Play the source to be recorded.
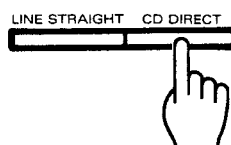
3 Start recording on the cassette deck connected to the TAPE 1 jacks.

Recording starts.

4 Press the CD DIRECT key.

LINE STRAIGHT   CD DIRECT

CD DIRECT indicator lights up.

5 Play the CD player.

● No other source can be selected until the cassette deck recording is stopped.
● The source name on the display remains the same, i.e. the name of the recorded source.

Listening to a broadcast

■ Receiving broadcast stations and storing them in memory (preset operation)

1 Select the TUNER input with the input selector.

- Previous reception mode is resumed.
- Pressing the BAND key also set the unit to tuner mode.

TUNER
Main unit

TUNER
Remote control unit

2 Select the broadcast band (FM, AM).

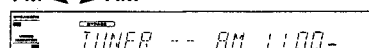Each time the BAND key is pressed, the reception band changes between FM and AM.
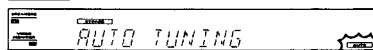
BAND
Main unit

TUNER
(BAND)
Remote control unit

FM ◄─► AM

`TUNER -- AM 1100-`

3 Enter the AUTO tuning mode.

AUTO

AUTO indicator lights up.

`AUTO TUNING`

- The indicator goes on (auto) and off (manual) alternately every time the key is pressed. Normally, select the auto tuning mode.
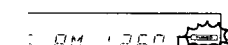
4 Tune a desired station.

To decrease frequency
∨ TUNING ∧
To increase frequency

`AM 1260-`
The TUNED indicator lights up when a station is received.

TUNING keys on the main unit

| Auto tuning mode	Manual tuning mode
Press once. (Tuning stops automatically when a station is received.)	Press repeatedly, or press and hold, until the station is received.

- When the TUNING UP key is pressed, the frequency increases. When the TUNING DOWN key is pressed, the frequency decreases.
- Use manual tuning mode in case the radio wave is weak and noisy. At this time, the stereo FM broadcast is received in monaural mode.

5 Store the stations in preset memory.

① Press the MEMORY key. | Main unit only |

MEMORY

MEMORY indicator lights up (for about 5 seconds).

`SET MEMORY`
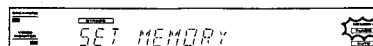
- Proceed the step ② while the MEMORY indicator is lighted.

② Press the numeric keys to preset the station.

Examples
To select preset No. 03, [3]
To select preset No. 10, [+10], [0]
To select preset No. 23, [+10], [+10], [3]
To select preset No. 30, [+10], [+10], [+10], [0]

MEMORY indicator goes off.

`TUNER 06 AM 1260-`
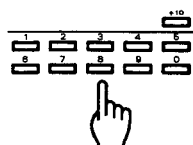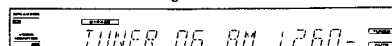
- A total of 30 stations can be preset in memory regardless of their broadcast bands.
- If a station has been preset under the numeric key pressed, the previous preset content is replaced by the new station.
- Repeat step 2 to 5 above for each of other stations to be preset.

■ Receiving a preset station

1 Select the TUNER input with the input selector.

TUNER

2 Select the desired station.

Press the numeric key under which the station is preset.

Example

To select preset No. 15, press the │+10│ key once, then the │5│ key once.

● The frequency of the station received will be displayed.

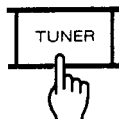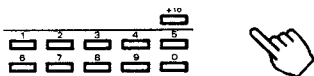## ■ Listening to all preset stations in sequence: PRESET SCAN

Press the P.SCAN key.

P.SCAN

Main unit

P.SCAN

Remote control unit

● Preset stations are received in order of 1→2→3...10...20 ...30→1 every time the key on the main unit is pressed. With the key on the remote control unit, preset stations are received in order of 1→2→...10... every time the │△│ (UP) key is pressed, or in order of 30→29...20... every time the │▽│ (DOWN) key is pressed.
● Holding one of these keys pressed recalls the preset stations in sequence at 0.5-second intervals. When the key is released, the current preset station is received.

ETH-0100R

D.S.P.S. (Direct Surround Preset Station) function

If you set a desired surround mode when presetting a broadcast station, that surround mode will be automatically recalled when you recall the preset station. Pressing the D.S.P.S. key turns the surround recall function ON and OFF. The surround setting can be changed if desired. See page 22 for details.

D.S.P.S.

Last channel memory

When the band selector is switched or when the input selector is switched from another source to TUNER, the last received station is recalled for each of FM, AM when the power is switched ON.

BAND key

D.S.P.S. key DIRECT key Numeric keys
P.SCAN key
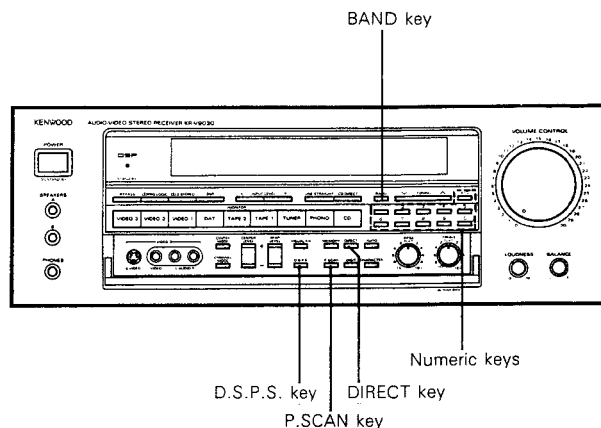
■ Direct tuning of radio stations

If you know the frequency of the desired station, it can be received directly by inputting the frequency using the numeric keys.

1 Select the broadcast band.

BAND

● FM or AM.
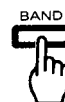
2 Press the DIRECT key.

DIRECT

Main unit

DIRECT

Remote control unit

3 Input the frequency of the desired station by pressing the numeric keys.
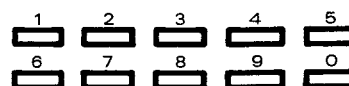
Example of input

Desired station		Order of pressing numeric keys	
FM	90 MHz	9, 0, 0	(100 kHz space)
		9, 0, 0, 0	(50 kHz space)
FM	102.5 MHz	1, 0, 2, 5	(100 kHz space)
		1, 0, 2, 5, 0	(50 kHz space)
AM	810 kHz	8, 1, 0	(9 kHz space)
		8, 1	(10 kHz space)
AM	1260 kHz	1, 2, 6, 0	(9 kHz space)
		1, 2, 6	(10 kHz space)

● If you commit a mistake in the input of numeric keys, restart the input from the beginning.

BAND key

MEMORY key   TUNING key

DIGIT key

CHARACTER key   Numeric keys

■ Displaying station names

Station names composed of up to four digits of characters and/or symbols can be displayed on the display.
Example: To receive FM 98.80 MHz, input its name with characters "CBE", and preset them under numeric key ③.
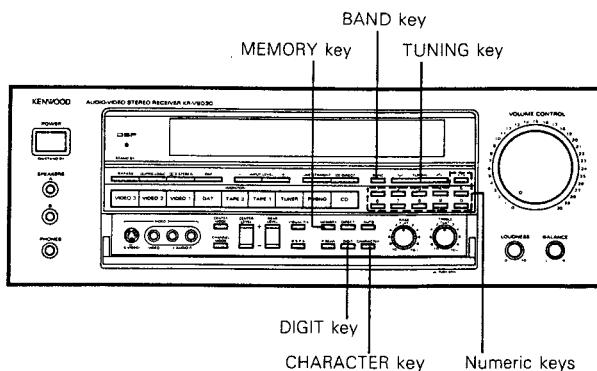
1 Receive FM 98.80 MHz, and enter the character input mode.

CHARACTER

INPUT CHARACTER

2 Select the characters to be displayed with that station.

① Display the desired character.

∨ TUNING ∧

Blinks.

_- - FM 98.80_ _

② Establish the selection.

DIGIT

Blinking digit changes to the next digit.
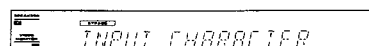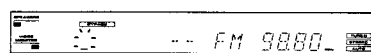
_- - FM 98.80_ _
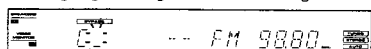
Types of characters that can be input

After having pressed the CHARACTER key, press the TUNING key to display the characters available.

A B C D ..... Z *
└ Blank position
9 8 ..... 3 2 1 0 / - +

③ Repeat steps ① and ② until all of the required characters have been input.
● To select "C", press the UP segment three times.
● To insert a space, simply press the DIGIT key.

3 End the character input.

CHARACTER

CBE   - - FM 98.80 _
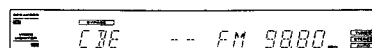
● The character input also terminates automatically when fourth character has been input.
● Press the CHARACTER key to terminate character input with three characters or less.

4 Preset them under key ③.

① Press the MEMORY key. | Main unit only |

● Proceed the step ② while the MEMORY indicator is lighted.

MEMORY

MEMORY indicator lights up (for about 5 seconds).

CBE   03 FM 98.80 _

② Press the numeric key ③.

+10

| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 0 |

MEMORY indicator goes off.

CBE   03 FM 98.80 _

(End of preset)

MEMORY key   TUNING key

DIGIT key   Numeric keys
CHARACTER key
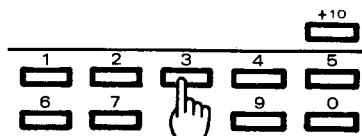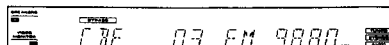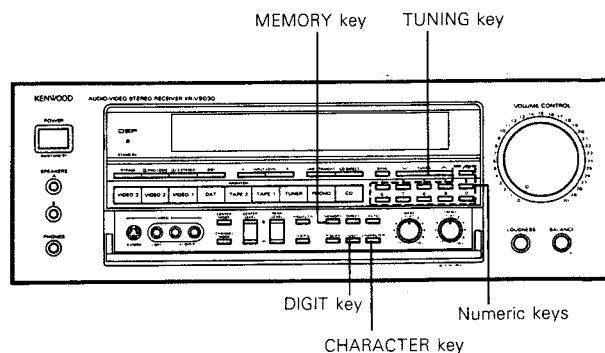
■ Changing a station name

Example: To change station name "FHN8" preset with AM
810 kHz frequency under key ② to "FEN".

1 Receive preset station of ② by preset tuning, and enter the character input stand-by mode.
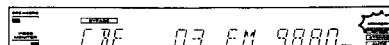
CHARACTER

Blinks.

2 Move the blinking digit to the second digit.

DIGIT   Press once.

Blinking digit changes to the next digit.
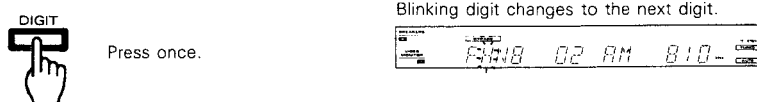
3 Select "E" with the TUNING key.

TUNING

4 Move the blinking digit by two digits.

DIGIT   Press twice.

5 Select the blank with the TUNING key.

TUNING

- The character input terminates automatically when fourth character has been input.

6 Preset the new name under numeric key ② .

① Press the MEMORY key. | Main unit only |

MEMORY

MEMORY indicator lights up.

- Proceed in the step ② while the MEMORY indicator is lighted.

② Press the numeric key ② .

MEMORY indicator goes off.
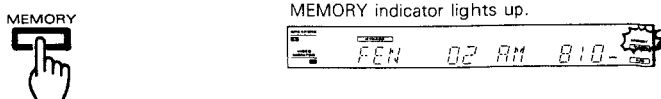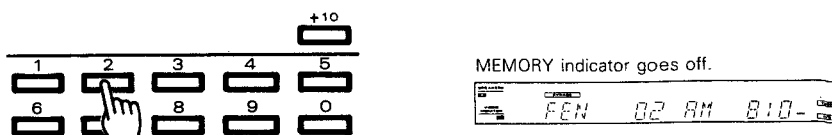
(End of change)

■ D.S.P.S. setting procedure (Direct Surround Preset Station)

1 Tune in a desired station.

P.SCAN   ∨ TUNING ∧

`TUNER -- FM 9520_`
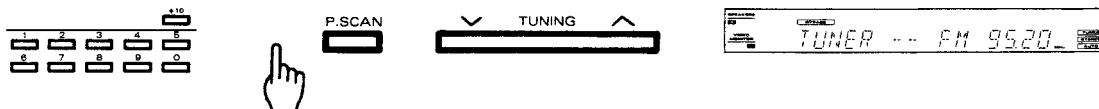
2 Set the D.S.P.S. key to ON. [Main unit only]

D.S.P.S.

`DSPS ON`

3 Select the presence pattern to be stored with the station.

Press the M.CALL key. [Remote control unit only]

M.CALL

- Each press changes the presence pattern in the order: M1 → M2 → M3 → M4 → M5 → M6 → M1.

`M1`

- Be sure to store the desired presence settings in M1~M6 ahead of time. See page 29 for the storing procedure.

4 Preset the station with the selected presence pattern.

Press the MEMORY key. [Main unit only]

MEMORY

- Proceed the step ② while the MEMORY indicator is lighted.

② **Press the desired preset number key.**
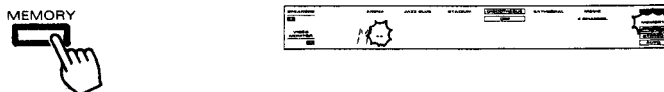
- To change the setting, perform the procedure again from step 2.

`M1`
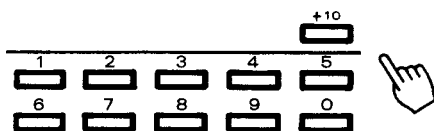
■ D.S.P.S. playback

1 Set the D.S.P.S. key to ON. [Main unit only]

D.S.P.S.

2 Press the appropriate preset number key.
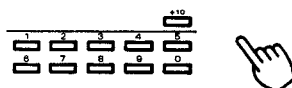
Presence

Surround effect

The powerful feeling of enveloping sound experienced in places such as movie theaters, concert halls, and baseball stadiums is due to the fact that sound comes from not only in front but also from the periphery. To reproduce this type of feeling, this unit incorporates three types of surround decoders which are selected according to the playback source. Moreover, each presence mode employs a dedicated DSP (digital signal processor), making it possible to create a dynamic sound space without losing sound quality. To extract the maximum surround effect, read this instruction manual thoroughly and adjust the system to match the configuration of your listening room.

Presence

Dolby PRO·LOGIC Surround

Videotapes and laserdiscs which bear the ☐☐ | DOLBY SURROUND | mark are recorded with the same Dolby surround data used in movie theaters. Since this unit incorporates a Dolby PRO·LOGIC surround decoder using a dedicated DSP, you can enjoy the same acoustic effects experienced in movie theaters in the comfort of your own home.

> Make the following settings: ① CENTER MODE, ② DELAY TIME, ③ CENTER LEVEL (not available when the CENTER MODE is set to PHAN-TOM), and ④ REAR LEVEL.

Dolby 3 STEREO

When the left and right speakers are positioned far apart from each other, the sound image positioning of the center speaker deteriorates. To improve the positioning of center sound image, use Dolby 3 STEREO mode. (See page 25.)

> Set the CENTER MODE. If you use a combination of front and center speaker, use this mode.

DSP Presence

When playing a source such as a CD, tape, or tuner, processing the signals with high-quality digital processing provides added sound enjoyment. To create the perfect sound field for each source, this unit uses a 16-bit A/D converter to convert analog signals into digital signals, and uses a DSP to create initial reflected sound and echoes.

- This unit contains six preset presence patterns. (See page 27.)
- If desired, you can make fine adjustments to modify the sound field according to your taste. (See page 27.)
- Set the center level according to the positioning of your speakers. (See page 24.)

> Make the following settings: ① PRESENCE/CHANNEL MODE, ② DELAY TIME, ③ PRESENCE LEVEL, ④ CENTER LEVEL, and ⑤ REAR LEVEL.

Delay time

As shown in the example of illustration, the sound of piano played on the stage attains the ears of listener as a synthesis of the direct sound from piano, the indirect sounds which are reflected once or twice by the reflectors, ceiling and side and back walls, and the reverberation sounds which repeat infinite reflections until they fade out completely.
The indirect sounds always pass through longer routes compared to the direct sound. The delay between the direct and indirect sounds is called the DELAY TIME, and the level of the indirect or reverberated sounds is called the PRESENCE LEVEL. The indirect sounds accompanied with delay play a very important role in providing better sound effects and the feeling of presence of concert halls, etc.
The acoustic field also varies depending on the speaker arrangement. It is recommended to try various delay time setting to obtain the best sound field possible.

Example of a concert hall

Indirect sound

Direct sound ◄── are delayed sounds.
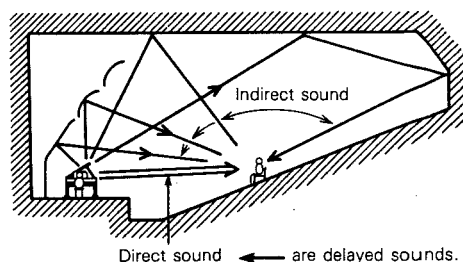
■ Speaker positioning

Standard layout

```
FRONT          TV          FRONT
SPEAKER                    SPEAKER
         CENTER SPEAKER


REAR                        REAR
SPEAKER                    SPEAKER
```

① **Dolby PRO·LOGIC mode**
   Set the center level according to the center speaker size. (See page 25.)
   ····· **NORMAL** (when using a small center speaker)
   ····· **WIDE** (when using a medium-sized or larger center speaker)

② **DSP 4CH mode**

● Select the desired presence mode. (See page 25.)

When no rear (surround) speakers are used

```
FRONT         TV          FRONT
SPEAKER                   SPEAKER
        CENTER SPEAKER
```

① **Dolby 3 STEREO mode**
   Set the center level according to the center speaker size. (See page 25.)
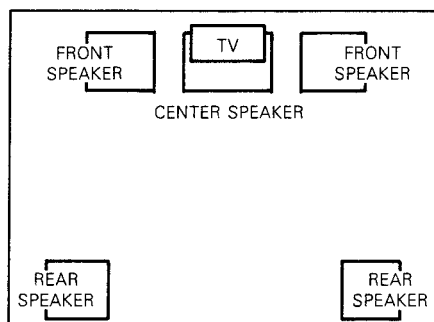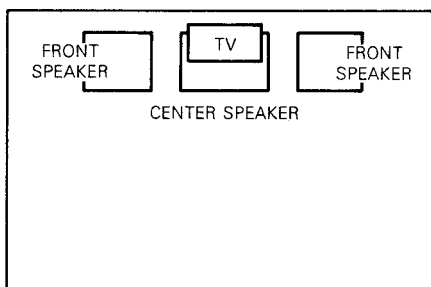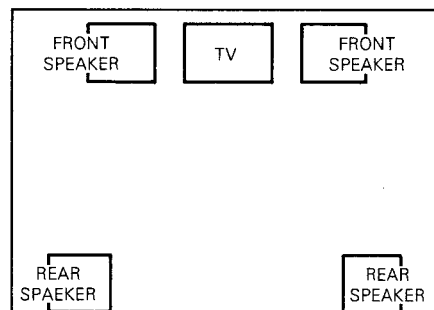   ····· **NORMAL** (when using a small center speaker)
   ····· **WIDE** (when using a medium-sized or larger center speaker)

② **DSP 3CH mode**

● Select the desired presence mode. (See page 25.)

When no center speaker is used

```
FRONT        TV          FRONT
SPEAKER                  SPEAKER



REAR                      REAR
SPAEKER                  SPEAKER
```

Dolby PRO·LOGIC mode
   Set the center mode to PHANTOM.
   ····· **PHANTOM**

Setting the Delay time

The delay time should be adjusted according to the difference between the distance from the listening position to the front speakers and the distance to the rear (surround) speakers. Determine the appropriate delay time using the formula shown below.

Relationship between the positioning of the rear (surround) speakers and the delay time at the listening position:

Delay time $= 20$ ms $+ 3$ ms $\times$ (Am - Bm)

```
FRONT      TV       FRONT
SPEAKER            SPEAKER
   CENTER SPEAKER
                        A = 4 m
Litening
position
   Approx. 20 ms
                        B = 4 m
REAR              REAR
SPEAKER          SPEAKER
```

```
FRONT      TV       FRONT
SPEAKER            SPEAKER
   CENTER SPEAKER
                        A = 3 m
   Approx. 17 ms
                        B = 4 m
REAR              REAR
SPEAKER          SPEAKER
```

```
FRONT      TV       FRONT
SPEAKER            SPEAKER
   CENTER SPEAKER
                        A = 4 m
   Approx. 23 ms    B = 3 m
REAR              REAR
SPEAKER          SPEAKER
```
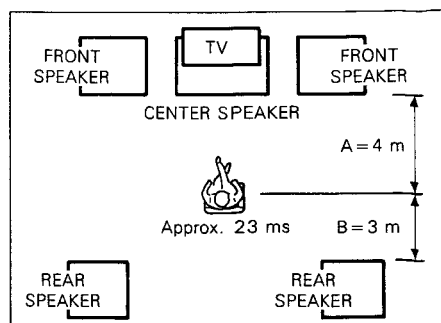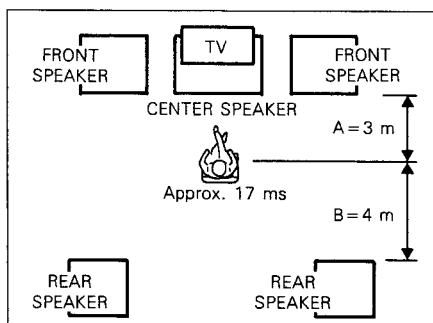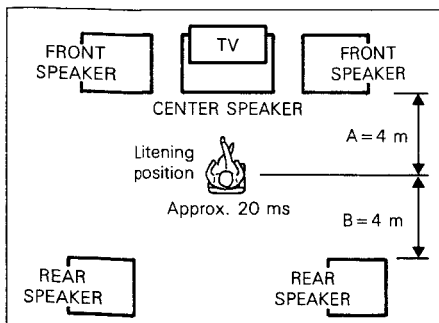
Dolby PRO·LOGIC/3 STEREO Mode

■ Making adjustments

> Make adjustments using the remote control unit.

PRO·LOGIC key — BYPASS key — TEST TONE ON/OFF key — TEST TONE MODE key — 3 STEREO key — DSP key

---

1 Set the unit to ▯▯ PRO·LOGIC or ▯▯ 3 STEREO mode.

Press the ▯▯ PRO·LOGIC or ▯▯ 3 STEREO key.

Main unit   Remote control unit

---
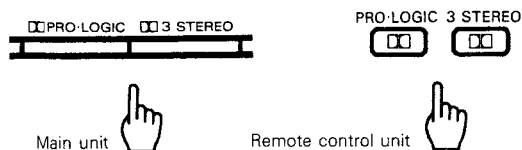
2 Select the center mode.

CENTER MODE

Each press of the CENTER MODE key changes the center mode as follows:

In ▯▯ PRO·LOGIC mode,

NORMAL → WIDE → PHANTOM

In ▯▯ 3 STEREO mode,

NORMAL ↔ WIDE

- Set the center mode to NORMAL if using a small center speaker, or set to WIDE if using a medium-sized or larger speaker.
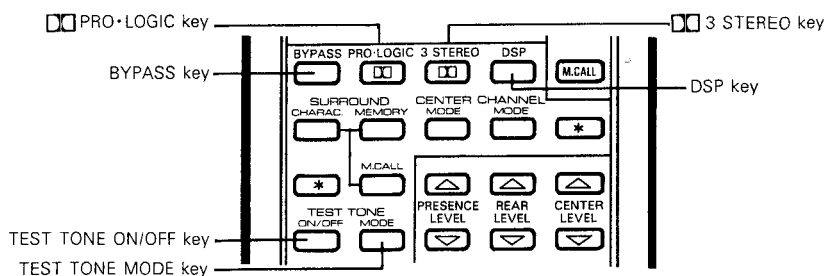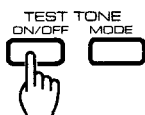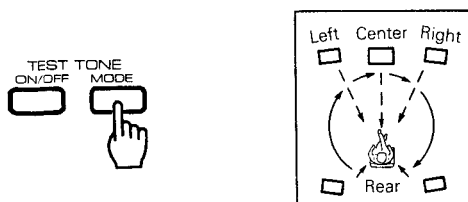- If no center speaker is used, set to PHANTOM.

---

3 Turn on the test tone.

Press the TEST TONE ON/OFF key.

TEST TONE ON/OFF   MODE

- Press the key at the listening position.

---

4 Press the TEST TONE MODE key.

TEST TONE ON/OFF   MODE

Left Center Right

Rear

- In ▯▯ PRO·LOGIC or ▯▯ 3 STEREO mode, each press of the key emits a test tone from the speakers in the following sequence: LEFT → CENTER → RIGHT → REAR (no test tone is emitted from the rear speakers in ▯▯ 3 STEREO mode).
- When PHANTOM mode is set, the test tone is emitted in the order: LEFT → RIGHT → REAR.

---

5 Adjust so that the sound volume is the same for all speakers.

① Center level adjustment
- Adjust within a range of −78 to 0 dB.

REAR LEVEL   CENTER LEVEL   CENTER -20dB

② Rear level adjustment
- Adjust within a range of −78 to 0 dB.
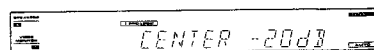
REAR LEVEL   CENTER LEVEL   REAR -20dB
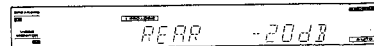
- Adjust the rear level so that the sound volume from the rear speakers is the same.
- In ▯▯ 3 STEREO mode, since rear speakers are not used, adjust so that the sound volume is the same for all three front speakers.

---

6 Turn off the test tone.

Press the TEST TONE ON/OFF key.

TEST TONE ON/OFF   MODE

---
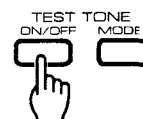
7 Set the delay time.

DELAY TIME   DELAY TIME 20
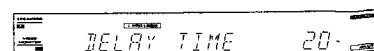
- This setting is not necessary in ▯▯ 3 STEREO mode.
- Adjust the delay time within a range of 15~30 ms, using the formula on page 24 as a guide.
- Each time a DELAY TIME key is pressed, the delay time increases or decreases by 1 ms.

■ Playback

When playing video software bearing the ☐☐ | DOLBY SURROUND | mark, you can enjoy the same Dolby Surround acoustic effects experienced in movie theaters.

1 Set the unit to ☐☐ PRO·LOGIC or ☐☐ 3 STEREO mode.

☐☐PRO·LOGIC ☐☐3 STEREO

PRO·LOGIC 3 STEREO

Main unit   Remote control unit
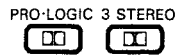
2 Select the center mode.

CENTER MODE   CENTER MODE

Main unit   Remote control unit

☐☐ PRO·LOGIC

NORMAL ⟶ WIDE ⟶ PHANTOM

☐☐ 3 STEREO

NORMAL ⟵⟶ WIDE

Each time the CENTER MODE key is pressed, the center mode changes and the selected mode is displayed.

3 Play the Dolby Surround video software.

4 Adjust the input level. | Main unit only |

− INPUT LEVEL +

· OVER LEVEL indicator

SPEAKERS   OVER LEVEL

VIDEO MONITOR
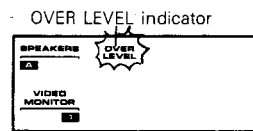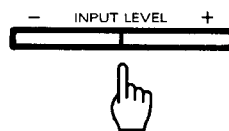
● The input level is normally set at −20 dB.
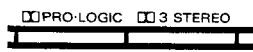● Adjust only when the "OVER LEVEL" indicator lights so that the indicator goes out.

5 Adjust the volume.

● If the "OVER LEVEL" indicator lights, readjust the input level.
● If you have adjusted the REAR LEVEL and CENTER LEVEL controls and the DELAY TIME key according to the ☐☐ PRO·LOGIC/ ☐☐ 3 STEREO adjustment procedure, do not change the adjustments.
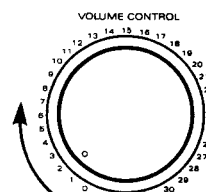
VOLUME CONTROL

Adjusts the overall volume.

■ To cancel the presence function
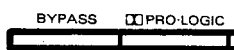
Press the BYPASS key.

BYPASS ☐☐PRO·LOGIC

BYPASS

Main unit   Remote control unit

● Set the unit to BYPASS mode when not using the presence play-back function.

DSP Presence

A built-in DSP (Digital Signal Processor) lets you create and enjoy the atmosphere of various types of locations where performances are held.

■ DSP Presence settings····· ①~⑥

① PRESENCE   Select from ARENA, JAZZ CLUB, STADIUM, DISCOTHEQUE, CATHEDRAL, and MOVIE.

② CHANNEL MODE   Select 3ch or 4ch.

Using the following table as a reference, you can enjoy various presence effects by simply selecting the desired PRESENCE MODE. Also, you can adjust these settings to create your own original presence patterns and store them under the M1~M6 keys for later recall.

③ DELAY TIME   Adjust and set within a range of 5~100 ms.

④ PRESENCE LEVEL   Adjust and set within a range of −20 to 0 dB.

⑤ CENTER LEVEL   Adjust and set within a range of −78 to 0 dB.

⑥ REAR LEVEL   Adjust and set within a range of −78 to 0 dB.

Initial setting values				Variable setting values	
① PRESENCE MODE	② CHANNEL MODE	③ DELAY TIME LEVEL	④ PRESENCE LEVEL	⑤ CENTER LEVEL	⑥ REAR LEVEL
ARENA	3 ch	60 ms	− 10 dB	− 78 ~ 0 dB	×
	4 ch	60 ms	− 8 dB	− 78 ~ 0 dB	− 78 ~ 0 dB
JAZZ CLUB	3 ch	25 ms	− 6 dB	− 78 ~ 0 dB	×
	4 ch	30 ms	− 6 dB	− 78 ~ 0 dB	− 78 ~ 0 dB
STADIUM	3 ch	70 ms	− 6 dB	− 78 ~ 0 dB	×
	4 ch	60 ms	− 6 dB	− 78 ~ 0 dB	− 78 ~ 0 dB
DISCOTHEQUE	3 ch	30 ms	− 4 dB	− 78 ~ 0 dB	×
	4 ch	20 ms	− 4 dB	− 78 ~ 0 dB	− 78 ~ 0 dB
CATHEDRAL	3 ch	70 ms	− 10 dB	− 78 ~ 0 dB	×
	4 ch	70 ms	− 6 dB	− 78 ~ 0 dB	− 78 ~ 0 dB
MOVIE	3 ch	15 ms	− 16 dB	− 78 ~ 0 dB	×
	4 ch	10 ms	− 12 dB	− 78 ~ 0 dB	− 78 ~ 0 dB

ARENA .... This mode reproduces the sound field of a large, 2,500-seat hall, characterized by a long time interval between the original sound and the initial reflected sound.

JAZZ CLUB .... Creates a sound field with a "live" feeling by concentrating the initial reflected sound delay time to within approx. 20~70 ms.

STADIUM.......... Initial reflected sound is diffused with a long delay time, reproducing sound as if it were emitted from the PA system of a baseball stadium.

DISCOTHEQUE ... Uses short delay times for the initial reflected sound to create a feeling of concentrated energy.

CATHEDRAL ...... This mode reproduces the sound field of a large cathedral by using a long delay time for the initial reflected sound followed by continued reverberations.

MOVIE............. Reproduces the sound field of a high-quality movie theater.

■ Creating a DSP sound field

1 Select the presence mode.

Main unit   Remote control unit

2 Select the channel mode.


Main unit   Remote control unit
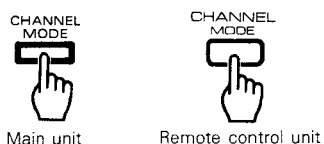
● Select 3ch or 4ch.

3 Play the music source.

4 Adjust the input level. | Main unit only |
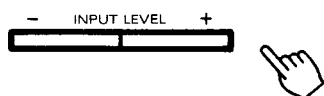
● The input level is normally set to − 20 dB.
● Adjust only when the "OVER LEVEL" indicator lights so that the indicator goes out.
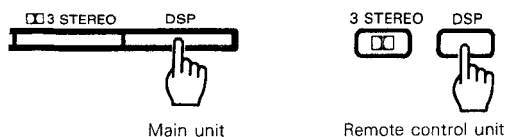
5 Adjust the presence level.
| Remote control unit only |

● Set in 2 dB steps within a range of − 20 to 0 dB.

6 Adjust the volume.

① **Adjust the center level.**
● Set within a range of − 78 to 0 dB.
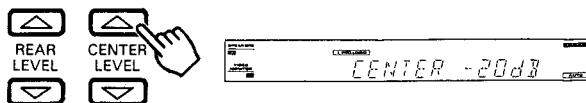
② **Adjust the rear level.**
● Set within a range of − 78 to 0 dB.
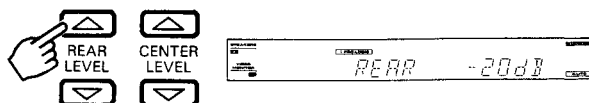
7 Adjust the sound quality. | Main unit only |
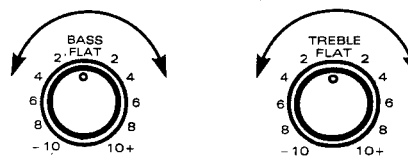
8 Set the delay time. | Remote control unit only |
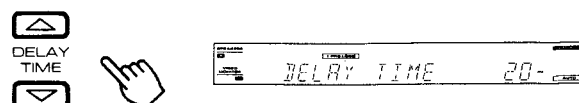
● The delay time can be adjusted in 5 ms steps within a range of 5 ms to 100 ms.

To store the created presence pattern, see page 29.

■ To cancel the presence function

Press the BYPASS key.

Main unit   Remote control unit
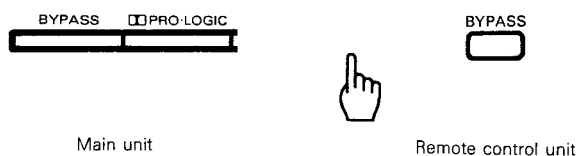
● Set the unit to BYPASS mode when not using the presence playback function.

■ Store a presence pattern [Remote control unit only]

1 Select or create the presence pattern to be stored.

- BYPASS cannot be stored.

2 Press the SURROUND MEMORY key.

SURROUND
CHARAC. MEMORY

SET MEMORY
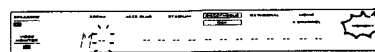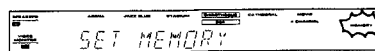
- The unit enters storing standby mode.

3 Press the M.CALL key.
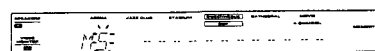
M.CALL

- Set to M1 ~ M6.

4 Press the SURROUND MEMORY key.

SURROUND
CHARAC. MEMORY
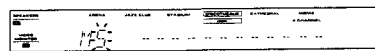
- Storing is completed.

To restore the initial settings

While the desired memory number is shown on the display, press and hold the
M.CALL key for more than 5 seconds.

M.CALL

- The stored name also returns to the initially set name.

Surround Memory (M1 ~ M6) initial settings

|	M1	M2	M3	M4	M5	M6
Name	ARENA 1	ARENA 2	JAZZ CLUB 1	JAZZ CLUB 2	MOVIE 1	MOVIE 2
Presence mode	DSP	DSP	DSP	DSP	DSP	DSP
CHANNEL MODE	4 ch	3 ch	4 ch	3 ch	4 ch	3 ch
DSP MODE	ARENA	ARENA	JAZZ CLUB	JAZZ CLUB	MOVIE	MOVIE
CENTER LEVEL	− 18 dB	− 18 dB	− 17 dB	− 15 dB	− 17 dB	− 17 dB
REAR LEVEL	− 20 dB	−	− 18 dB	−	− 18 dB	−
DELAY TIME	40 ms	40 ms	20 ms	20 ms	10 ms	10 ms
PRESENCE LEVEL	− 8 dB	− 8 dB	− 10 dB	− 10 dB	− 18 dB	− 16 dB

■ Naming a stored presence pattern [Remote control unit]

This function lets you freely create a name for a stored presence pattern and displays the name whenever that presence pattern is selected.

---

1 Display the desired presence pattern.

---

2 Press the SURROUND CHARAC. key.

● The unit enters character input ready mode.

SURROUND
CHARAC. MEMORY

INPUT CHARACTER

---
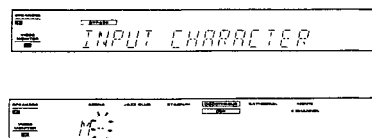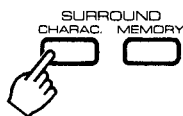
3 Enter the desired characters.

① **Select a character.**
The REAR LEVEL keys are the character input keys.

The displayed character changes each time the key is pressed.

REAR   CENTER
LEVEL   LEVEL

← DOWN   UP →

_ A B C .... X Y Z * + − / 0 1 9
└ Blank position
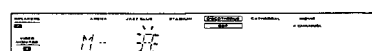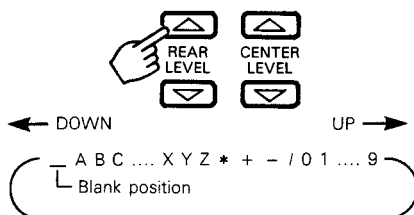
② **Move the character input position.**
The CENTER LEVEL keys are the cursor keys.

REAR   CENTER
LEVEL   LEVEL
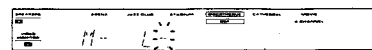
③ **Repeat steps ① and ② until all necessary characters are entered.**

● Up to 12 characters can be entered.

---

4 Press the SURROUND CHARAC. key.

● This sets the entered characters.

SURROUND
CHARAC. MEMORY

INPUT CD

---
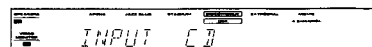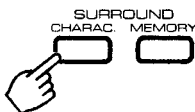
5 Press the SURROUND MEMORY key.

● Select M1 ~ M6.

SURROUND
CHARAC. MEMORY

M: LIVE HOUSE

---
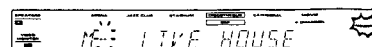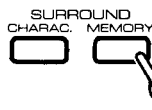
6 Press the M.CALL key.

M.CALL

MS LIVE HOUSE

---
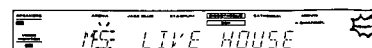
7 Press the SURROUND MEMORY key.

● Storing is completed.

SURROUND
CHARAC. MEMORY

MS LIVE HOUSE
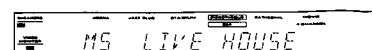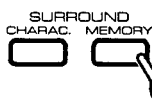
Note:
If no characters are entered, the previous name is stored as is.

Operation of video components

When connect to the KENWOOD LD player having system control terminal, do not connect anything to the system control terminal of the LD player.

■ Playback of videotape

1 Switch the power of the monitor TV ON.

2 Press the VIDEO 1 key.

VIDEO 1 indicator
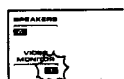
The display shows the present audio input.

- When an input select key other than VIDEO 1, 2 or 3 is pressed, the audio input of the selected source will be played in place of the audio input from VIDEO 1.

3 Play the VCR.

4 Adjust the volume.

VOLUME CONTROL
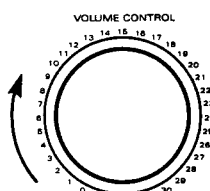
■ Recording of video source

1 Connect the video source component to be recorded to the VIDEO 2 jacks.

- A video player deck, video camera, LD player, DBS tuner, etc., can be connected. Refer to page 11.

2 Press the VIDEO 2 key.

VIDEO 2 indicator

The display shows the persent audio input.

- When an input select key other than VIDEO 1, 2 or 3 is pressed, the audio input of the selected source will be played in place of the audio input from VIDEO 2.

3 Play the video source component.

4 Put the VCR in the record mode.

VISUAL FIX key ┃Main unit only┃

If you have a TV connected to the MONITOR OUT jack, you can use this function to lock in a selected video input (VIDEO 1, VIDEO 2, or VIDEO 3). Once a video input is selected and VISUAL FIX is ON, the video signal will not change even if the input selector is switched to another video input. This enables you to watch the video signal from the VIDEO 3 input while listening to the audio from the VIDEO 2 input, for example. Care should be used during recording, however, so as not to record the wrong audio signal with the video signal.

VISUAL FIX

SPEAKERS
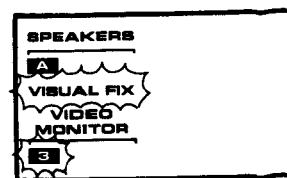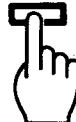
Remote control operation

In addition to the remote control of the receiver unit, the provided remote control unit can control a KENWOOD cassette tape deck, CD player, turntable, graphic equalizer, etc., connected via the KENWOOD system control cords.

■ Loading batteries

1 Remove the cover.
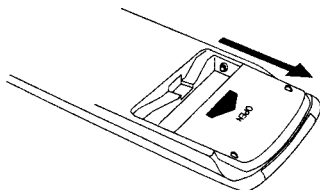
- While gently pressing the cover located on the rear of the remote control unit, slide it in the direction of the arrow.

2 Insert four batteries.
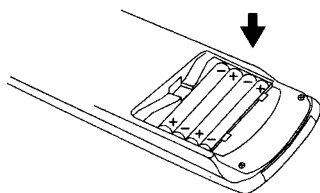
- Make sure that the batteries are inserted as indicated with the polarity marking on the bottom.

Note:
The batteries provided are to be used for checking the remote control operations. Their service life may be short.

3 Close the cover.

Replacing batteries

1. If the TRANSMIT indicator does not light even when the operation key is pressed, the batteries are exhausted. Replace the batteries. We recommend that the alkaline batteries (LR03/AM-4) which have longer service life be used.
2. The programmed contents are not immediately lost when the batteries are removed for replacement. However, they could be lost if the unit is left without batteries for more than 3 minutes. In such a case, the programming should be performed again. The function signals of the non-learning, or fixed keys are not lost even in this case.

Note:
Avoid using old and new batteries together, as this may cause corrosion.

■ Operating range of the remote control unit

The normal operating range may change depending on temperature, humidity, and other environmental conditions, but it is roughly specified as shown in the figure.

Remote control light receptor

Approx. 6 m

20°   20°

Model: RC-150
Infrared system
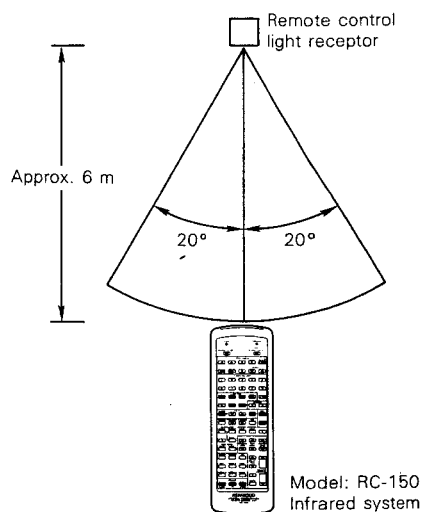
Note:
1. If two or more remote control operation keys are to be pressed successively, press each key securely and leave an interval of more than 1 second between presses.
   Pressing a key immediately after pressing another key may cause malfunction.
2. Malfunction may occur in case direct sunlight or the light of a high-frequency lighting fluorescent lamp enters the remote control light receptor. In such a case, change the installtion position of the unit so that the malfunction does not occur.

■ Operation of remote control unit

The supplied remote control unit has two operation modes: USE , for operating various components in your system, and LEARN , for programming ("learning") the remote control functions of other AV equipment.
There are three USE modes. One is AUDIO mode, for operating KENWOOD system audio components, another is VIDEO mode, for operating AV components, and the third is AUX mode, for operating other optional equipment.
LEARN mode is used to program the functions of other AV components into this remote control unit. This lets you perform the functions of several remote control units using a single remote control unit.

.LEARN/USE switch

Set to USE for operating various components in AUDIO mode, VIDEO mode, or AUX mode.
Set to LEARN when programming function of other remote control unit.

LEARN• •USE

Mode switch

VIDEO
AUDIO•••AUX

Set this switch according to the type of component you plan to operate.

LEARN indicator

Blinks or lights steadily during programming procedure.

TRANSMIT indicator

Lights up while the remote control signal is being transmitted.

Numeric keys

When the CD source is selected, these keys can be used as the numeric keys of the CD player.
When the TUNER source is selected, they can be used as the numeric keys of the tuner.
When the mode switch is set to VIDEO, a LD player (manufactured by KENWOOD) can also be operated.

How to enter numerals:
For 23 press +10 twice and 3
For 40 press +10 four times and 0

Input select keys

These keys operate the input selector.

VOLUME CONTROL keys

Adjust the volume. During operation, the VOLUME CONTROL on the front panel turns and the indicator on the knob blinks at high speed.

POWER keys

Turn the power of components ON/OFF.
For the TV and VIDEO keys, specific control signals should be programmed under them.

MUTE key

Press to reduce the volume temporarily.
During operation, the indicator on the VOLUME CONTROL knob blinks.

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REMOTE CONTROL UNIT
RC-150

Remote control operation
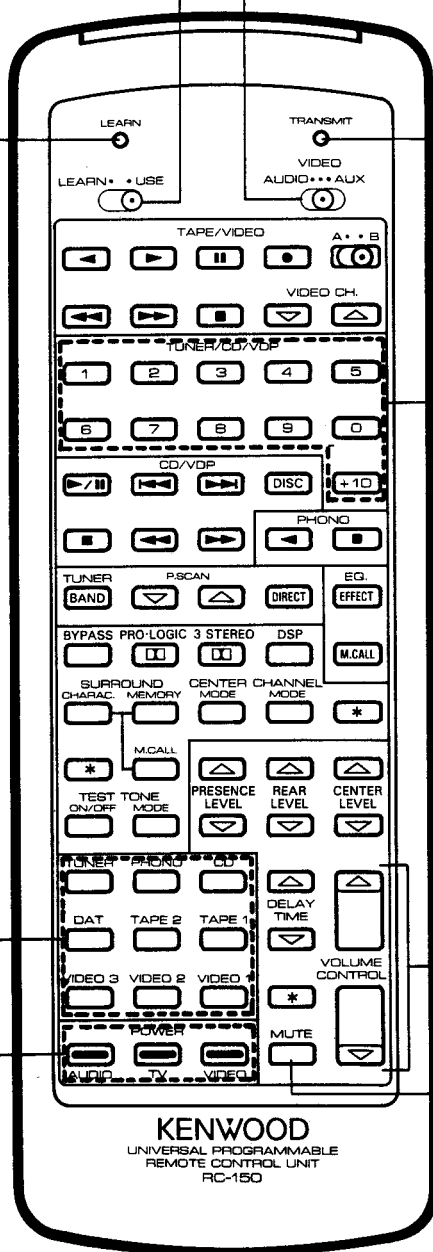
System component operation keys

LEARN/USE switch

Set to USE and select AUDIO mode, VIDEO mode, or AUX mode according to the type of component you plan to operate.

LEARN• •USE

Tape deck/VCR operation keys

To operate a tape deck, set the mode switch to AUDIO and select the tape deck A/B switch, then press the operation keys.
To operate a VCR, program the functions of the VCR's remote control unit into this remote control unit, then set the mode switch to VIDEO and press the operation keys.

CD player operation keys

To operate a CD player, set the mode switch to AUDIO and press the operation keys.
To operate a LD player (manufactured by KENWOOD), set the mode switch to VIDEO and press the operation keys.
DISC: This key functions as a disc selector key with CD players equipped with a disc changer. For details, refer to your CD player's instruction manual.

Tuner operation keys

To operate a tuner, set the mode switch to AUDIO and press the operation keys.
BAND: Selects the band.
P.SCAN: Scans the preset stations in sequence.
DIRECT: Used in conjunction with the numeric keys to directly select a station.

Mode switch

Set this switch according to the type of component you want to operate.

Tape deck A/B switch

A• •B

Set the mode switch to AUDIO.
To operate the A deck of a double cassette deck, set the A/B switch to "A" and press the operation keys.
To operate the B deck of a double cassette deck, set the A/B switch to "B" and press the operation keys.
To operate a single cassette deck, set the A/B switch to "A" and press the operation keys.

Turntable operation keys

Set the mode switch to AUDIO and press the operation keys.
For details on operating the play and stop functions of your turntable, refer to the turntable's instruction manual.

Graphic equalizer operation keys

Set the mode switch to AUDIO and press the operation keys.
EFFECT: This key turns the graphic equalizer effect ON/OFF.
M.CALL: This key recalls equalizer patterns stored in memory.

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REMOTE CONTROL UNIT
RC-150

For detailed functions of the system components, please read the instruction manual provided with each of them.

Presence-related operation keys

LEARN/USE switch

Set to USE and select AUDIO mode, VIDEO mode, or AUX mode according to the type of component you plan to operate.

LEARN• •USE

⊡⊡ PRO·LOGIC key

Sets the unit to ⊡⊡ PRO·LOGIC mode.

⊡⊡ 3 STEREO key

Sets the unit to ⊡⊡ 3 STEREO mode.

DSP key

Sets the unit to DSP mode. Each press of the key switches the sound field mode.

BYPASS key

Cancels the selected presence mode.

SURROUND keys

CHARAC.: Sets the unit to character input ready mode for entering presence pattern names.

MEMORY: Stores the current presence settings.

M.CALL: Recalls stored presence patterns.

TEST TONE keys

ON/OFF: Turns the test tone ON/OFF when ⊡⊡ PRO·LOGIC or ⊡⊡ 3 STEREO mode is selected.

MODE: Each press of this key changes the output position of the test tone signal.

DELAY TIME key

Adjust the delay time.
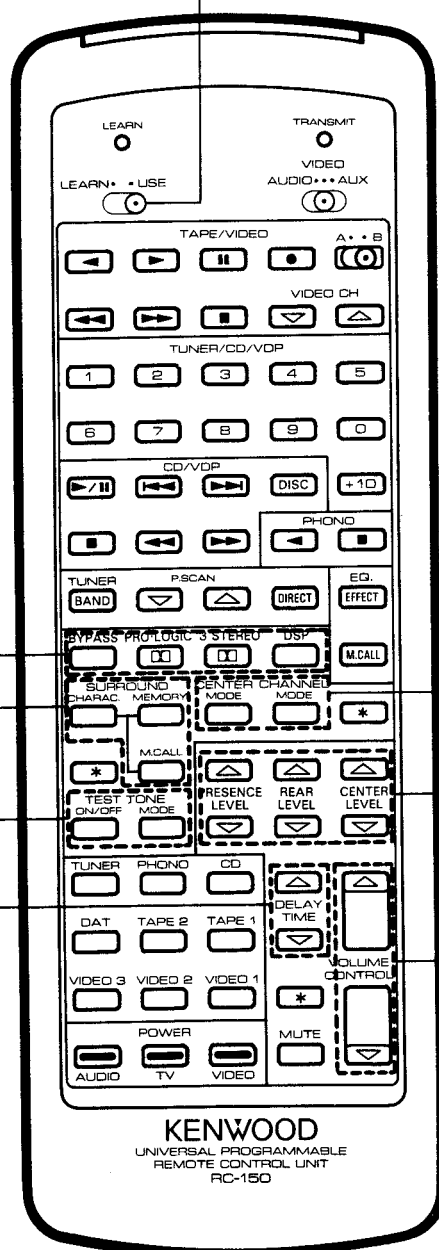
CENTER MODE key

Switches the center mode in the ⊡⊡ PRO·LOGIC or ⊡⊡ 3 STEREO mode.

CHANNEL MODE key

Switch the 3CH and 4CH modes of DSP.

CENTER LEVEL keys

Adjust the center speaker volume. When the CHARAC. key is pressed beforehand, these keys allow to select the column where a presence pattern name character is entered.

REAR LEVEL keys

Adjust the rear speaker volume. When the CHARAC. key is pressed beforehand, these keys allow to select a character of a presence pattern name.

PRESENCE LEVEL keys

Adjust the presence level in the DSP mode.

VOLUME CONTROL keys

Adjust the overall volume.

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REMOTE CONTROL UNIT
RC-150

■ Programming functions from other remote control units

1 ① Set the LEARN/USE switch to LEARN.

LEARN• •USE   VIDEO
AUDIO•••AUX
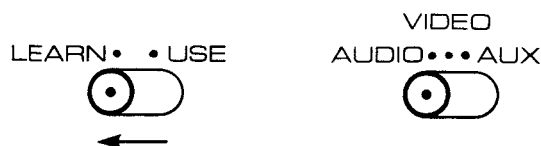
② Set the mode switch according to the type of component functions to be programmed.

LEARN• •USE   VIDEO
AUDIO•••AUX

---
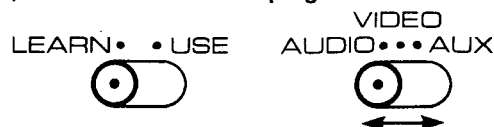
2 Place the transmitter section of this remote control unit so that it faces directly toward the transmitter section of the other remote control unit.

Other remote control unit   2~5 cm
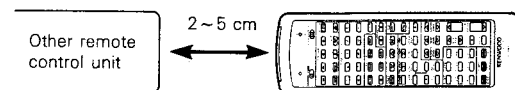
Position the two remote control units so that their transmitter sections are separated by a distance of 2~5 cm (13/16″~2″).

---

3 Press the operation key you wish to program on this remote control unit.

Press one of the programmable learning keys.

Other remote control unit

The LEARN indicator lights up.

---

4 Within 30 seconds after pressing the learning key, press the corresponding operation key of the other remote control unit.

Transmitted.

- Keep pressing the other remote control unit's operation key until the LEARN indicator goes out.
- When the lighted LEARN indicator blinks twice and then goes out, programming is completed.
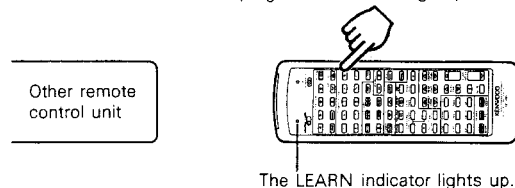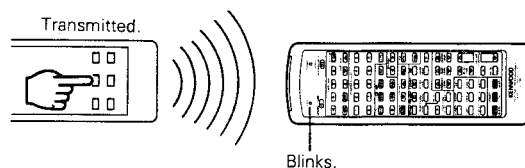- To continue programming other keys, repeat steps 3 and 4.

Blinks.

To change the programmed contents

Reprogram the desired key according to the "Programming functions from other remote control units" procedure.

- The previously programmed function is automatically deleted and replaced with the new function.

Overlay sheet

It is a good idea to write down the programmed contents of the operation keys on the overlay sheet.
Peel off the protective sheet and write on the sheet using an oil-based felt tip·pen or a pencil. Erase by rubbing firmly with a normal rubber eraser.
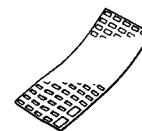
Notes:

1. If the other remote control unit has a strong light output, programming may not be carried out properly. If this occurs, move the two remote control units farther away from each other and program again.
2. If both the LEARN indicator and the TRANSMIT indicator blink simultaneously during programming, either the selected key cannot be programmed or the function was not programmed properly. Carry out the programming procedure again.
3. Functions of remote control units which do not use infrared signals or which use a special signal modulation system cannot be programmed into this remote control unit. Also, programming is impossible when the remote control unit's memory becomes full.

4. If more than 30 seconds elapse after pressing a learning key, the LEARN indicator will go out. Since programming is not possible if the LEARN indicator is not lighted, carry out the programming procedure again from step 3.
5. If two or more learning keys are pressed on this remote control unit, the key pressed last will be programmed.
6. This remote control unit should only be programmed with functions for operating AV equipment. Do not program functions for any other type of equipment (such as an air conditioner).

■ To erase all of the programmed contents

This procedure erases the programmed contents of all the learning keys in 3 modes, restoring the remote control unit to its initial state.

1 Remove the cover.

2 Set the LEARN/USE switch to LEARN.

VIDEO

LEARN• •USE   AUDIO•••AUX
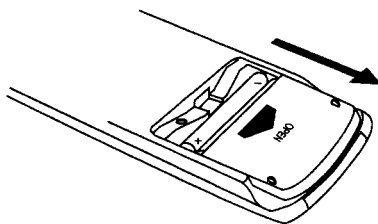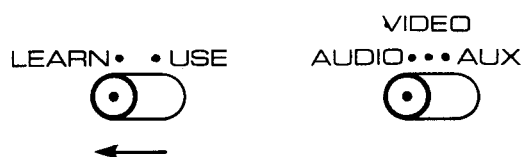
3 Press one of the learning keys.
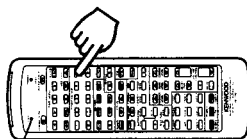
The LEARN indicator lights up.

,4 Press the reset key.

● Press within 30 seconds after pressing the learning key.

Stick or similar object

Reset key
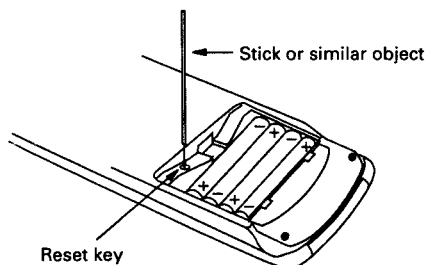
In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	• Batteries are exhausted. • The audio cords and the system control cords are not connected properly. • The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. • The source component to be operated does not contain the analog disk, tape(s) or CD. • An attempt is made to play a tape which is being recorded in the cassette deck. • The LEARN/USE select switch is set to LEARN.	• Replace with new batteries. • Connect properly referring to "System connections". • Operate the remote control unit within the controllable range. • Place an analog disk, tape(s) or CD in the source component to be played. • Wait until the recording is completed. • Set the LEARN/USE select switch to USE.

Amplifier, speakers

| Symptom	Cause	Remedy
Sound is not output.	• The speaker cords are disconnected. • The volume is set to the minimum position. • The MUTING key of the amplifier is set to ON and the point indicator is blinking.	• Connect them properly referring to "System connections". • Adjust the volume to a proper level. • Press the MUTING key to OFF.
No sound comes out, and "*PROTECTION ON*" is shown on the display.	• Speaker cords are short-circuited.	• Turn the power off, eliminate the short-circuiting, then turn on the power again.
Sound is not output from one of the speakers.	• The speaker cord is disconnected. • The BALANCE control is set to an extreme position.	• Connect it properly referring to "System connections". • Adjust the Left/Right balance.
Sound is not output from the surround rear speaker and/or center speaker, or their sound is very small.	• The rear speaker cords and/or center speaker cord are disconnected. • The presence mode has not been engaged. • The REAR LEVEL and/or CENTER LEVEL controls are set to the minimum level.	• Connect them properly referring to "System connections". • Set the presence mode. • Adjust the REAR LEVEL and CENTER LEVEL controls.
A hum noise is generated when the PHONO input select key is pressed.	• The audio cord from the turntable is not inserted securely into the PHONO jacks. • The turntable is not grounded.	• Insert the audio cord plugs securely into the PHONO jacks. • Connect the grounding wire to the GND terminal on the rear panel.

Tuner

Symptom	Cause	Remedy
Radio stations cannot be received.	• No antenna is connected. • The broadcast band is not set properly. • The frequency of the desired station is not tuned.	• Connect an antenna. • Set the broadcast band properly. • Tune the frequency of the desired station.
A station which was preset cannot be received by pressing the corresponding numeric key.	• The preset station belongs to a frequency that cannot be received. • The preset memory was cleared because the power cord had been unplugged for a long period of time.	• Preset a station with a receivable frequency. • Preset the station again.
Interference.	• Noise due to ignition noise of an automobile. • Noise due to an influence from an electric appliance. • Noise due to a nearby TV set.	• Install the outdoor antenna apart from the road. • Turn off the power of the appliance. • Install the system more apart from the TV set.

Notes:
1. This system is microprocessor-controlled, so malfunction may occur due to external noise or interference noise. In such a case, unplug the power cord, plug it and turn power on again.
2. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

Specifications

△ Caution: Read this page carefully to ensure safe operation.

(For U.S.A. and Canada)

Audio section

Rated power output at the STEREO operation

> 120 watts per channel minimum RMS, both channels driven at 8 Ω, from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortions. (FTC)

Power output at the Surround operation
Front (1 kHz, 0.9% T.H.D. at 8 Ω)...... 75 W + 75 W
Center (1 kHz, 0.9% T.H.D. at 8 Ω) .... 75 W
Rear (1 kHz, 0.9% T.H.D. at 8 Ω)...... 20 W + 20 W

Total harmonic distortion (1 kHz, 8 Ω)... 0.003% at 65 W
Frequency response
CD...................... 10 Hz~50 kHz, +0 dB, −3 dB

Signal to noise ratio (IHF-A)
PHONO (MM)........................ 78 dB for 5 mV input
CD, TAPE, VIDEO .... 100 dB for 200 mV input
Input sensitivity/impedance
PHONO (MM)................................ 2.5 mV/47 kΩ
CD, TAPE, VIDEO.......................... 200 mV/47 kΩ
Tone controls
BASS.................................. ±10 dB (at 100 Hz)
TREBLE .... ±10 dB (at 10 kHz)
Loudness control at −30 dB VOLUME level
.... +8 dB (100 Hz), +2dB (10 kHz) max.

Video section

VIDEO inputs/outputs
(Composite)............................ 1 Vp-p/75 Ω
S-VIDEO inputs/outputs
(Luminance signal) .... 1 Vp-p/75 Ω
(Chrominance signal) .... 0.286 Vp-p/75 Ω

FM Tuner section

Tuning frequency range .... 87.5 MHz~108 MHz
Antenna impedance .... 75 Ω unbalanced

Sensitivity (IHF)................. 10.8 dBf (0.95 μV at 75 Ω)
50 dB quieting sensitivity
MONO........................... 16.2 dBf (3.5 μV at 75 Ω)
STEREO........................... 38.2 dBf (45 μV at 75 Ω)
Total harmonic distortion at 1,000 Hz
MONO 0.1%
STEREO 0.2%
Signal to noise ratio at 65 dBf (IHF)
MONO... 80 dB
STEREO.. 74 dB
Selectivity (IHF ±400 kHz)............................... 53 dB
Stereo separation (IHF at 1 kHz)....................... 50 dB

Frequency response... 30 Hz~15 kHz, +0.5 dB, −2.0 dB

AM Tuner section

Tuning frequency range............... 530 kHz~1,700 kHz
Usable sensitivity........................... 10 μV/(400 μV/m)
Total harmonic distortion................................. 0.3%
Signal to noise ratio .... 50 dB
Selectivity... 25 dB

General

Power consumption... 3 A
Dimensions.......... 440 (W) × 163 (H) × 415 (D) mm
(17-5/16") × (6-7/16") × (16-5/16")
Weight (net)..................................... 13.9 kg (30.6 lb)

AC outlets........ switched×3, total 200 W, 1.6 A max.

(For other countries)

Audio section

Rated power output at the STEREO operation
(IHF '66) from 20 Hz to 20 kHz,
0.06% T.H.D., at 8 Ω..................... 140 W + 140 W

Power output at the Surround operation
Front (1 kHz, 0.9% T.H.D. at 8 Ω)...... 75 W + 75 W
Center (1 kHz, 0.9% T.H.D. at 8 Ω) .... 75 W
Rear (1 kHz, 0.9% T.H.D. at 8 Ω)...... 20 W + 20 W

Total harmonic distortion (1 kHz, 8 Ω).... 0.03% at 65 W
Frequency response
CD...................... 10 Hz~50 kHz, +0 dB, −3 dB

Signal to noise ratio (IHF-A)
PHONO (MM) .... 78 dB for 5 mV input
CD, TAPE, VIDEO .... 100 dB for 200 mV input
Input sensitivity/impedance
PHONO (MM)................................. 2.5 mV/47 kΩ
CD, TAPE, VIDEO............................. 200 mV/47kΩ
Tone controls
BASS .... ±10 dB (at 100 Hz)
TREBLE .... ±10 dB (at 10 kHz)

Loudness control at −30 dB VOLUME level
.... +8 dB (100 Hz), +2 dB (10 kHz) max.

VIDEO inputs/outputs
(Composite).. 1 Vp-p/75 Ω
S-VIDEO inputs/outputs
(Luminance signal) .... 1 Vp-p/75 Ω
(Chrominance signal) .... 0.286 Vp-p/75 Ω

FM Tuner section

Tuning frequency range .... 87.5 MHz~108 MHz
Antenna impedance.... 300 Ω balanced & 75 Ω unbalanced

Sensitivity (IHF)................. 10.8 dBf (0.95 μV at 75 Ω)
50 dB quieting sensitivity
MONO........................... 16.2 dBf (3.5 μV at 75 Ω)
STEREO........................... 38.2 dBf (45 μV at 75 Ω)
Total harmonic distortion at 1 kHz
MONO 0.1%
STEREO 0.2%
Signal to noise ratio at 65 dBf (IHF)
MONO... 80 dB
STEREO.. 74 dB
Selectivity (IHF ±400 kHz)............................... 53 dB
Stereo separation (IHF at 1 kHz)....................... 50 dB

Frequency response... 30 Hz~15 kHz, +0.5 dB, −2.0 dB

AM Tuner section

Tuning frequency range
9 kHz step............................. 531 kHz~1,602 kHz
10 kHz step........................... 530 kHz~1,610 kHz
Usable sensitivity .... 10 μV/(400 μV/m)
Total harmonic distortion................................. 0.3%
Signal to noise ratio .... 50 dB
Selectivity... 25 dB

General

Power consumption .... 300 W (IEC)
dimensions............ 440 (W) × 163 (H) × 415 (D) mm
Weight (net) .... 13.9 kg

AC outlets .... switched×200 W max.

Note:
KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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